

TSD File Inventory Index

Date June 18, 2004

Initial CM Kines

Facility Name <u>Northrop Grumman Systems Corporation (Two Fields Site)</u>	
Facility Identification Number <u>LD005 128 988</u>	
A.1 General Correspondence	B.2 Permit Docket (B.1.2)
A.2 Part A / Interim Status	1 Correspondence
1 Correspondence	2 All Other Permitting Documents (Not Part of the ARA)
2 Notification and Acknowledgment	C.1 Compliance - (Inspection Reports)
3 Part A Application and Amendments	C.2 Compliance/Enforcement
4 Financial Insurance (Sudden, Non Sudden)	1 Land Disposal Restriction Notifications
5 Change Under Interim Status Requests	2 Import/Export Notifications
6 Annual and Biennial Reports	C.3 FOIA Exemptions - Non-Releasable Documents
A.3 Groundwater Monitoring	D.1 Corrective Action/Facility Assessment
1 Correspondence	1 RFA Correspondence
2 Reports	2 Background Reports, Supporting Docs and Studies
A.4 Closure/Post Closure	3 State Prelim. Investigation Memos
1 Correspondence	4 RFA Reports
2 Closure/Post Closure Plans, Certificates, etc	D. 2 Corrective Action/Facility Investigation
A.5 Ambient Air Monitoring	1 RFI Correspondence
1 Correspondence	2 RFI Workplan
2 Reports	3 RFI Program Reports and Oversight
B.1 Administrative Record	4 RFI Draft /Final Report

Total -2

5 RFI QAPP		7 Lab data Soil Sampling/Groundwater	
6 RFI QAPP Correspondence		8 Progress Reports	
7 Lab Data, Soil-Sampling/Groundwater		D.5 Corrective Action/Enforcement	
8 RFI Progress Reports		1 Administrative Record 3008(h) Order	
9 Interim Measures Correspondence		2 Other Non-AR Documents	
10 Interim Measures Workplan and Reports		D.6 Environmental Indicator Determinations	
D.3 Corrective Action/Remediation Study		1 Forms/Checklists	
1 CMS Correspondence		E. Boilers and Industrial Furnaces (BIF)	
2 Interim Measures		1 Correspondence	
3 CMS Workplan		2 Reports	
4 CMS Draft/Final Report		F Imagery/Special Studies (Videos, photos, disks, maps, blueprints, drawings, and other special materials.)	
5 Stabilization		G.1 Risk Assessment	
6 CMS Progress Reports		1 Human/Ecological Assessment	
7 Lab Data, Soil-Sampling/Groundwater		2 Compliance and Enforcement	
D.4 Corrective Action Remediation Implementation		3 Enforcement Confidential	
1 CMI Correspondence		4 Ecological - Administrative Record	
2 CMI Workplan		5 Permitting	
3 CMI Program Reports and Oversight		6 Corrective Action Remediation Study	
4 CMI Draft/Final Reports		7 Corrective Action/Remediation Implementation	
5 CMI QAPP		8 Endangered Species Act	
6 CMI Correspondence		9 Environmental Justice	

Note Transmittal Letter to Be Included with Reports

Comments

Documents do not justify individual folder per schedule!

Northrop Grumman
Systems
031 273 0002
Cook County

NORTHROP GRUMMAN

Electronic Sensors and Systems Sector
Northrop Grumman Corporation
Post Office Box 17319
Baltimore, Maryland 21203

May 2, 2001

Ms. Nikki Burkett
State of Illinois
Environmental Protection Agency
Division of Land Pollution Control
1021 N. Grand Avenue, East
P.O. Box 19276
Springfield, IL 62794-9276

RECEIVED
MAY 21 2001
PROGRAM MANAGEMENT BRANCH
Waste, Pesticides & Toxics Division
U.S. EPA - REGION 5

RECEIVED
MAY 16 2001
IEPA-DLPC

Re: Corporate Name Change

Dear Ms. Burkett:

Please be advised that on April 2, 2001, Northrop Grumman Corporation changed its name to Northrop Grumman Systems Corporation and became a wholly owned subsidiary of a holding company known as Northrop Grumman Corporation. Northrop Grumman Systems Corporation will continue to hold all assets and liabilities presently held, and all information regarding the facilities and their points of contact will remain unchanged. This name change will not result in a change in the facilities' operations, and we will continue to comply with all current requirements and/or conditions. The following is a list of the affected facilities and their respective EPA Identification numbers:

- Northrop Grumman, Defensive Systems Division - ILR000045963
1605 Rohlwing Road
- Northrop Grumman, Defensive Systems Division - ILD981088826
520 Hicks Road
- Northrop Grumman, Defensive Systems Division - ILD005128988
600 Hicks Road

Thank you for your attention to this matter. If you have any questions or need further information, please feel free to call me at (410) 765-8832.

Very truly yours,

Kip Keenan

Kip Keenan, Manager
Environmental Resources ES³

cc: Dick Grieves Northrop Grumman
David Gurrie Northrop Grumman

CERT/RR: 7000 1670 0005 4527 6662

RECEIVED
MAY 20 2001
EPA RECORDS ROOM
Waste, Pesticides & Toxics Division
U.S. EPA - REGION 5
name changed
5/21/01
AK



UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V

111 West Jackson Blvd.
CHICAGO, ILLINOIS 60604

REPLY TO ATTENTION OF:
RCRA ACTIVITIES

APR 16 1982

Anthony Swetonic, Facility Engineer - Manager
Northrop Corporation - Defense Systems Division
600 Hicks Road
Rolling Meadows, Illinois 60008

RE: Interim Status Acknowledgement USEPA ID No. ILD 005 128 988
FACILITY NAME: NORTHROP CORPORATION - DEFENSE SYSTEMS DIVISION

Dear Mr. Swetonic:

This is to acknowledge that the U.S. Environmental Protection Agency (USEPA) has completed processing your Part A Hazardous Waste Permit Application. It is the opinion of this office that the information submitted is complete and that you, as an owner or operator of a hazardous waste management facility, have met the requirements of Section 3005(e) of the Resource Conservation and Recovery Act (RCRA) for Interim Status. However, should USEPA obtain information which indicates that your application was incomplete or inaccurate, you may be requested to provide further documentation of your claim for Interim Status. Our opinion will be reevaluated on the basis of this information.

As an owner or operator of a hazardous waste management facility, you are required to comply with the interim status standards as prescribed in 40 CFR Parts 122 and 265, or with State rules and regulations in those States which have been authorized under Section 3006 of RCRA. In addition, you are reminded that operating under interim status does not relieve you from the need to comply with all applicable State and local requirements.

The printout enclosed with this letter identifies the limit(s) of the process design capacities your facility may use during the interim status period. This information was obtained from your Part A Permit application. If you wish to handle new wastes, to change processes, to increase the design capacity of existing processes, or to change ownership or operational control of the facility, you may do so only as provided in 40 CFR Sections 122.22 and 122.23.

As stated in the first paragraph of this letter, you have met the requirements of 40 CFR Part 122.23; your facility may operate under interim status until such time as a permit is issued or denied. This will be preceded by a request from this office or the State (if authorized) for Part B of your application. Please contact Arthur Kawatachi of my staff at (312) 886-7449, if you have any questions concerning this letter or the enclosure.

Sincerely yours,

Karl J. Klepitsch, Jr., Chief
Waste Management Branch

TB
04-16-82

Enclosure

cc: J. J. McNaughton, Vice President - Financial Management

FACILITY NAME

EPA ID NUMBER

NORTHROP CORPORATION DEFENSE SYSTEMS DIV

ILD0005128988

FACILITY OPERATOR

NORTHROP CORP DEFENSE SYSTEMS DIV

RETYPE

FACILITY OWNER

NORTHROP CORP DEFENSE SYSTEMS DIV

FACILITY LOCATION

600 HICKS RD
ROLLING MEADOWS

IL 60008

PROCESS CODE

DESIGN CAPACITY

UNIT OF MEASURE

S01

5811,00000

G

*****KEY*****

PROCESS	PRO- CESS CODE	APPROPRIATE UNITS OF MEASURE	* UNIT OF MEASURE	CODE
STORAGE:			* GALLONS	G
*****			* LITERS	L
CONTAINER	S01	G OR L	* CUBIC YARDS	Y
TANK	S02	G OR L	* CUBIC METERS	C
WASTE PILE	S03	Y OR C	* GALLONS PER DAY	U
SURFACE IMPOUNDMENT	S04	G OR L	* LITERS PER DAY	V
DISPOSAL:			* TONS PER HOUR	D
*****			* METRIC TONS\HOUR	W
INJECTION WELL	D79	G, L, U, OR V	* GALLONS\HOUR	E
LANDFILL	D80	A OR F	* LITERS\HOUR	H
LAND APPLICATION	D81	B OR Q	* ACRE-FEET	A
OCEAN DISPOSAL	D82	U OR V	* HECTARE-METER	F
SURFACE IMPOUNDMENT	D83	G OR L	* ACRES	B
TREATMENT:			* HECTARES	Q
*****			* POUNDS\HOUR	J
TANK	T01	U OR V	* KILOGRAMS\HOUR	R
SURFACE IMPOUNDMENT	T02	U OR V	* TONS PER DAY	N
INCINERATOR	T03	D, W, E, OR H	* METRIC TONS\DAY	S
OTHER	T04	J, R, N, S, U, V	*	

PAF



**ACKNOWLEDGEMENT OF NOTIFICATION
OF HAZARDOUS WASTE ACTIVITY
(VERIFICATION)**

This is to acknowledge that you have filed a Notification of Hazardous Waste Activity for the installation located at the address shown in the box below to comply with Section 3010 of the Resource Conservation and Recovery Act (RCRA). Your EPA Identification Number for that installation appears in the box below. The EPA Identification Number must be included on all shipping manifests for transporting hazardous wastes; on all Annual Reports that generators of hazardous waste, and owners and operators of hazardous waste treatment, storage and disposal facilities must file with EPA; on all applications for a Federal Hazardous Waste Permit; and other hazardous waste management reports and documents required under Subtitle C of RCRA.

EPA I.D. NUMBER

• ILD005128988 REACKNOWLEDGEMENT

NORTHROP CORPORATION
600 HICKS RD
ROLLING MEADOWS

IL 60008

INSTALLATION ADDRESS

600 HICKS RD
ROLLING MEADOWS

IL 60008



U.S. ENVIRONMENTAL PROTECTION AGENCY

NOTIFICATION OF HAZARDOUS WASTE ACTIVITY

INSTALLATION'S EPA I.D. NO.

ILD005128988

OK

94

I. NAME OF INSTALLATION

NORTHROP CORPORATION

II. INSTALLATION MAILING ADDRESS

600 HICKS RD

ROLLING MEADOWS

IL 60008

000117 AUG 20 1980

III. LOCATION OF INSTALLATION

600 HICKS RD

ROLLING MEADOWS

IL 60008

ACTIONS: If you received a preprinted label, affix it in the space at left. If any of the information on the label is incorrect, draw a line through it and supply the correct information in the appropriate section below. If the label is complete and correct, leave items I, II, and III below blank. If you did not receive a preprinted label, complete all items. "Installation" means a single site where hazardous waste is generated, treated, stored and/or disposed of, or a transporter's principal place of business. Please refer to the INSTRUCTIONS FOR FILING NOTIFICATION before completing this form. The information requested herein is required by law (Section 3010 of the Resource Conservation and Recovery Act).

FOR OFFICIAL USE ONLY

COMMENTS

INSTALLATION'S EPA I.D. NUMBER

APPROVED

DATE RECEIVED (yr., mo., & day)

F 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

I. NAME OF INSTALLATION

II. INSTALLATION MAILING ADDRESS

STREET OR P.O. BOX

C 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

CITY OR TOWN

ST.

ZIP CODE

III. LOCATION OF INSTALLATION

STREET OR ROUTE NUMBER

C 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

CITY OR TOWN

ST.

ZIP CODE

IV. INSTALLATION CONTACT

NAME AND TITLE (last, first, & job title)

PHONE NO. (area code & no.)

C 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

V. OWNERSHIP

A. NAME OF INSTALLATION'S LEGAL OWNER

C 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

B. TYPE OF OWNERSHIP (enter the appropriate letter into box)

VI. TYPE OF HAZARDOUS WASTE ACTIVITY (enter "X" in the appropriate box(es))

F = FEDERAL
M = NON-FEDERAL

M

☒ A. GENERATION☐ B. TRANSPORTATION (complete item VII)☒ C. TREAT/STORE/DISPOSE☐ D. UNDERGROUND INJECTION

VII. MODE OF TRANSPORTATION (transporters only - enter "X" in the appropriate box(es))

☐ A. AIR☐ B. RAIL☐ C. HIGHWAY☐ D. WATER☐ E. OTHER (specify):

VIII. FIRST OR SUBSEQUENT NOTIFICATION

Mark "X" in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your installation's EPA I.D. Number in the space provided below.

☒ A. FIRST NOTIFICATION☐ B. SUBSEQUENT NOTIFICATION (complete item C)

C. INSTALLATION'S EPA I.D. NO.

ILD005128988

IX. DESCRIPTION OF HAZARDOUS WASTES

Please go to the reverse of this form and provide the requested information.

IX. DESCRIPTION OF HAZARDOUS WASTES (continued from front)

A. HAZARDOUS WASTES FROM NON-SPECIFIC SOURCES. Enter the four-digit number from 40 CFR Part 261.31 for each listed hazardous waste from non-specific sources your installation handles. Use additional sheets if necessary.

1 F 0 0 1	2 F 0 0 3	3	4	5	6
7	8	9	10	11	12

B. HAZARDOUS WASTES FROM SPECIFIC SOURCES. Enter the four-digit number from 40 CFR Part 261.32 for each listed hazardous waste from specific industrial sources your installation handles. Use additional sheets if necessary.

13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30

C. COMMERCIAL CHEMICAL PRODUCT HAZARDOUS WASTES. Enter the four-digit number from 40 CFR Part 261.33 for each chemical substance your installation handles which may be a hazardous waste. Use additional sheets if necessary.

31 P 0 1 5	32 P 0 3 0	33 U 0 0 2	34 U 1 5 4	35 U 2 2 8	36
37	38	39	40	41	42
43	44	45	46	47	48

D. LISTED INFECTIOUS WASTES. Enter the four-digit number from 40 CFR Part 261.34 for each listed hazardous waste from hospitals, veterinary hospitals, medical and research laboratories your installation handles. Use additional sheets if necessary.

49	50	51	52	53	54
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E. CHARACTERISTICS OF NON-LISTED HAZARDOUS WASTES. Mark "X" in the boxes corresponding to the characteristics of non-listed hazardous wastes your installation handles. (See 40 CFR Parts 261.21 - 261.24.)

☐ 1. IGNITABLE
(D001)

☐ 2. CORROSIVE
(D002)

☐ 3. REACTIVE
(D003)

☐ 4. TOXIC
(D000)

X. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

SIGNATURE <i>Anthony L. Swetonic</i> A.L. SWETONIC	NAME & OFFICIAL TITLE (type or print) FACILITIES ENGINEERING MANAGER	DATE SIGNED 8-15-80
--	---	------------------------

Northrop Corporation

Defense Systems Division

NORTHROP

600 Hicks Road
Rolling Meadows, Illinois 60008

Telephone: 312/259-9600
TWX: 910/687-3785

March 16, 1984

Mr. William H. Miner, Chief
Technical, Permits, and Compliance Section
United States Environmental Protection Agency
Region V
230 South Dearborn Street,
Chicago, IL 60604

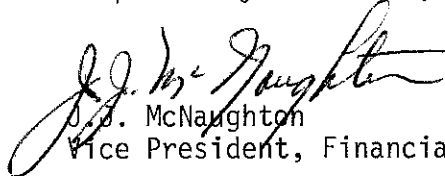
RECEIVED
MAR 20 1984
**WASTE MANAGEMENT
BRANCH**

Re: Part A Permit Application
ILD 005128988 G, TSD, PA

Dear Mr. Miner:

The attached revised Part A permit application is being submitted in response to your written request of January 10, 1984. If there are any questions regarding our application, please contact Lisa Riggle at 259-9600, Ext. 5957.

Respectfully submitted,


J. J. McNaughton
Vice President, Financial Management

Prepared by: Lisa Riggle
Chemical Engineer
Northrop Corp. D.S.D.

RECEIVED
3/21/84
EPA RAIN

dp

Attachment

c: A. Swetonic

Northrop Corporation

Defense Systems Division

NORTHROP

600 Hicks Road
Rolling Meadows, Illinois 60008

Telephone: 312/259-9600
TWX: 910/687-3785

December 16, 1983

John McGuire
Federal E.P.A.
Regional Administrator
Region 5
230 S. Dearborn Street
Chicago, Illinois 60604

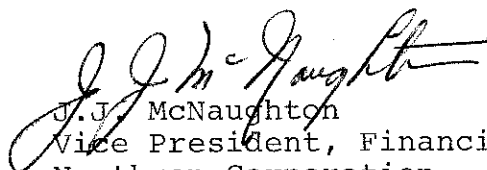
E.P.A. I.D. #ILD 005128988
G, TSO, PA

Dear Sir:

This letter is to inform you that Northrop Corporation's Defense Systems Division, at 600 Hicks Road is expanding its facility. The 40,000 sq. ft. addition will contain offices, electronic labs and an area for hazardous waste treatment.

Attached, for your reference, is a plan showing the expansion with existing and future hazardous waste areas indicated.

Sincerely,



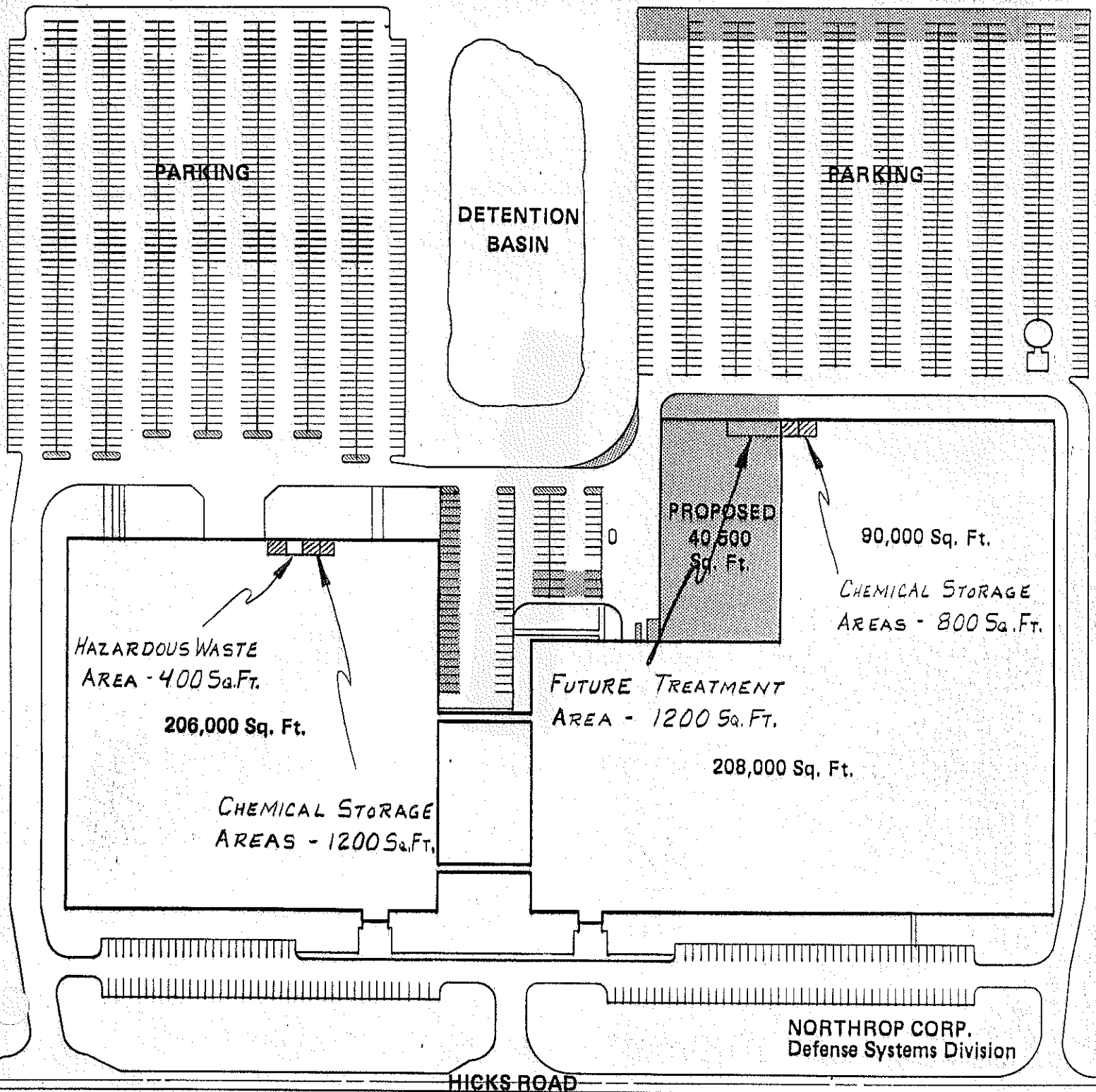
J.J. McNaughton
Vice President, Financial Mgm't.
Northrop Corporation
Defense Systems Division
600 Hicks Road
Rolling Meadows, IL 60008

c: Richard Carlson, Ill. E.P.A.
A. Swetonic, Northrop Corp.

Attachment

RECEIVED
DEC 20 1983
1STE MAN
BRAN...

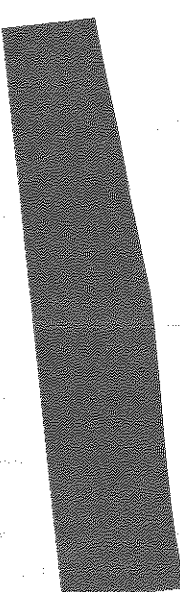
RECEIVED
1/03/84



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FORM 1	 ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION <i>Consolidated Permits Program</i> <i>(Read the "General Instructions" before starting.)</i>	I. EPA I.D. NUMBER <div style="border: 1px solid black; padding: 2px; font-family: monospace; font-size: 1.2em;"> F I L D 0 0 5 1 2 8 9 8 8 </div>
GENERAL II. POLLUTANT CHARACTERISTICS	<div style="border: 1px solid black; padding: 10px; min-height: 150px;"> PLEASE PLACE LABEL IN THIS SPACE </div>	
III. FACILITY NAME V. FACILITY MAILING ADDRESS VI. FACILITY LOCATION	GENERAL INSTRUCTIONS <p>If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.</p>	

SPECIFIC QUESTIONS	MARK "X"	FORM ATTACHED	SPECIFIC QUESTIONS	MARK "X"	FORM ATTACHED
	YES	NO		YES	NO
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X	B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X	D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X	H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X

III. NAME OF FACILITY	<div style="border: 1px solid black; padding: 2px; font-family: monospace;"> 1 SKIP NORTHROP CORP. DEFENSE SYSTEMS DIVISION </div>
------------------------------	--

IV. FACILITY CONTACT	B. PHONE (area code & no.)
<div style="border: 1px solid black; padding: 2px; font-family: monospace;"> 2 S.W.E.T.O.N.I.C. ANTHONY, FACIL. ENG. MGR 3.1.2 </div>	<div style="border: 1px solid black; padding: 2px; font-family: monospace;"> 2.5.9 9.6.0.0 </div>

V. FACILITY MAILING ADDRESS	D. ZIP CODE
<div style="border: 1px solid black; padding: 2px; font-family: monospace;"> 3 600 HICKS ROAD </div>	<div style="border: 1px solid black; padding: 2px; font-family: monospace;"> 60008 </div>

VI. FACILITY LOCATION	F. COUNTY CODE (if known)
<div style="border: 1px solid black; padding: 2px; font-family: monospace;"> 5 600 HICKS ROAD </div>	<div style="border: 1px solid black; padding: 2px; font-family: monospace;"> 60008 </div>

VII. SIC CODES (4-digit, in order of priority)

A. FIRST

B. SECOND

C. THIRD

D. FOURTH

VIII. OPERATOR INFORMATION

A. NAME

B. Is the name listed in Item VIII-A also the owner?

☒ YES ☐ NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box, if "Other", specify.)

F = FEDERAL
S = STATE
P = PRIVATEM = PUBLIC (other than federal or state)
O = OTHER (specify)

P (specify)

D. PHONE (area code & no.)

A 3 1 2 2 5 9 9 6 0 0

E. STREET OR P.O. BOX

600 HICKS ROAD

F. CITY OR TOWN

ROLLING MEADOWS

G. STATE

IL

H. ZIP CODE

60008

IX. INDIAN LAND

Is the facility located on Indian lands?

☐ YES ☒ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)

D. PSD (Air Emissions from Proposed Sources)

9 N D N A

9 P D N A

B. UIC (Underground Injection of Fluids)

E. OTHER (specify)

9 U D N A

9 T D N A (specify)

C. RCRA (Hazardous Wastes)

E. OTHER (specify)

9 R D N A

9 T D N A (specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

ELECTRONIC COUNTER MEASURES - DEFENSE SYSTEMS

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)

John J. McNaughton
Vice President, Financial Management

B. SIGNATURE

John J. McNaughton

C. DATE SIGNED

3/15/84

COMMENTS FOR OFFICIAL USE ONLY

FORM 3 RCRA		U.S. ENVIRONMENTAL PROTECTION AGENCY HAZARDOUS WASTE PERMIT APPLICATION Consolidated Permits Program <i>(This information is required under Section 3005 of RCRA.)</i>	I. EPA I.D. NUMBER <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:5%;">6</td> <td style="width:5%;">I</td> <td style="width:5%;">L</td> <td style="width:5%;">D</td> <td style="width:5%;">0</td> <td style="width:5%;">0</td> <td style="width:5%;">5</td> <td style="width:5%;">1</td> <td style="width:5%;">2</td> <td style="width:5%;">8</td> <td style="width:5%;">9</td> <td style="width:5%;">8</td> <td style="width:5%;">8</td> <td style="width:5%;">T</td> <td style="width:5%;">A</td> <td style="width:5%;">C</td> </tr> <tr> <td>71</td> <td>72</td> <td>73</td> <td>74</td> <td>75</td> <td>76</td> <td>77</td> <td>78</td> <td>79</td> <td>80</td> <td>81</td> <td>82</td> <td>83</td> <td>84</td> <td>85</td> <td>86</td> </tr> </table>	6	I	L	D	0	0	5	1	2	8	9	8	8	T	A	C	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86																																																						
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II. FIRST OR REVISED APPLICATION Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.																																																																																									
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III. PROCESSES — CODES AND DESIGN CAPACITIES A. PROCESS CODE — Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process (including its design capacity) in the space provided on the form (Item III-C). B. PROCESS DESIGN CAPACITY — For each code entered in column A enter the capacity of the process. 1. AMOUNT — Enter the amount. 2. UNIT OF MEASURE — For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.																																																																																									
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EXAMPLE FOR COMPLETING ITEM III (shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.																																																																																									
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III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "T04"). FOR EACH PROCESS ENTERED HERE, INCLUDE DESIGN CAPACITY.

IV. DESCRIPTION OF HAZARDOUS WASTES

- A. EPA HAZARDOUS WASTE NUMBER** — Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.
- B. ESTIMATED ANNUAL QUANTITY** — For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.
- C. UNIT OF MEASURE** — For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE CODE
POUNDS P
TONS T

METRIC UNIT OF MEASURE CODE
KILOGRAMS K
METRIC TONS M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES**1. PROCESS CODES:**

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

- 2. PROCESS DESCRIPTION:** If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER — Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

- Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
- In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
- Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV (shown in line numbers X-1, X-2, X-3, and X-4 below) — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

W Z 1-2	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEAS- URE (enter code)	D. PROCESSES	
				1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				included with above

Continued from page 2.

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)													FOR OFFICIAL USE ONLY															
<div> <div>W</div> <div>I</div> <div>L</div> <div>D</div> <div>0</div> <div>0</div> <div>5</div> <div>1</div> <div>2</div> <div>8</div> <div>9</div> <div>8</div> <div>8</div> <div>1</div> </div>													<div> <div>W</div> <div>DUP</div> <div>2</div> <div>DUP</div> </div>															
V. DESCRIPTION OF HAZARDOUS WASTES (continued)																												
LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES																								
				1. PROCESS CODES (enter)								2. PROCESS DESCRIPTION (if a code is not entered in D(1))																
1	F 0 0 3	6,000	P	S	0	1																				Recycled		
2	F 0 0 5																										Included in above	
3	F 0 0 2	10,000	P	S	0	1																					Recycled	
4	F 0 0 1	40,000	P	S	0	1																					Recycled	
5	F 0 0 7	10,000	P	S	0	1																					Recycled	
6	P 0 2 9	540	P	S	0	1																					Destroyed off site	
7	P 0 3 0																										Included in above	
8	P 1 0 4	1,700	P	S	0	1																					Recycled	
9	U 1 5 1	15	P	S	0	1																					Recycled	
10	D 0 0 1	8,000	P	S	0	1																						
11	U 1 5 4																										Included in above	
12	F 0 0 6	3,600	P	S	0	1																					Recycled	
13	D 0 0 7																										Included in above	
14	D 0 0 1	15,000	P	S	0	1	T	0	1																		Sludge disposed off site	
15	D 0 0 2	12,000	P	S	0	1	T	0	1																		Sludge disposed off site	
16	P 0 9 8	10,000	P	S	0	1	T	0	1																		Sludge disposed off site	
17	U 1 2 2																										Included in above	
18	D 0 0 3	1	P	S	0	1	T	0	1																			
19	D 0 0 7	5,000	P	S	0	1	T	0	1																		Sludge disposed off site	
20																												
21																												
22																												
23																												
24																												
25																												
26																												

IV. DESCRIPTION OF HAZARDOUS WASTE (continued)**E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.**

EPA I.D. NO. (enter from page 1)														
S	F	I	L	D	0	0	5	1	2	8	9	8	8	T/A C
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility (see instructions for more detail).

VI. PHOTOGRAPHS

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE (degrees, minutes, & seconds)										LONGITUDE (degrees, minutes, & seconds)									
4	2	4								8	8								
55	56	57	58	59	60	61	62	63	64	72	73	74	75	76	77	78	79		

VIII. FACILITY OWNER

☒ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER															2. PHONE NO. (area code & no.)									
E																								
3. STREET OR P.O. BOX															4. CITY OR TOWN									
F															G									
5. ST.															6. ZIP CODE									
15 16															47 48 49									

IX. OWNER CERTIFICATION

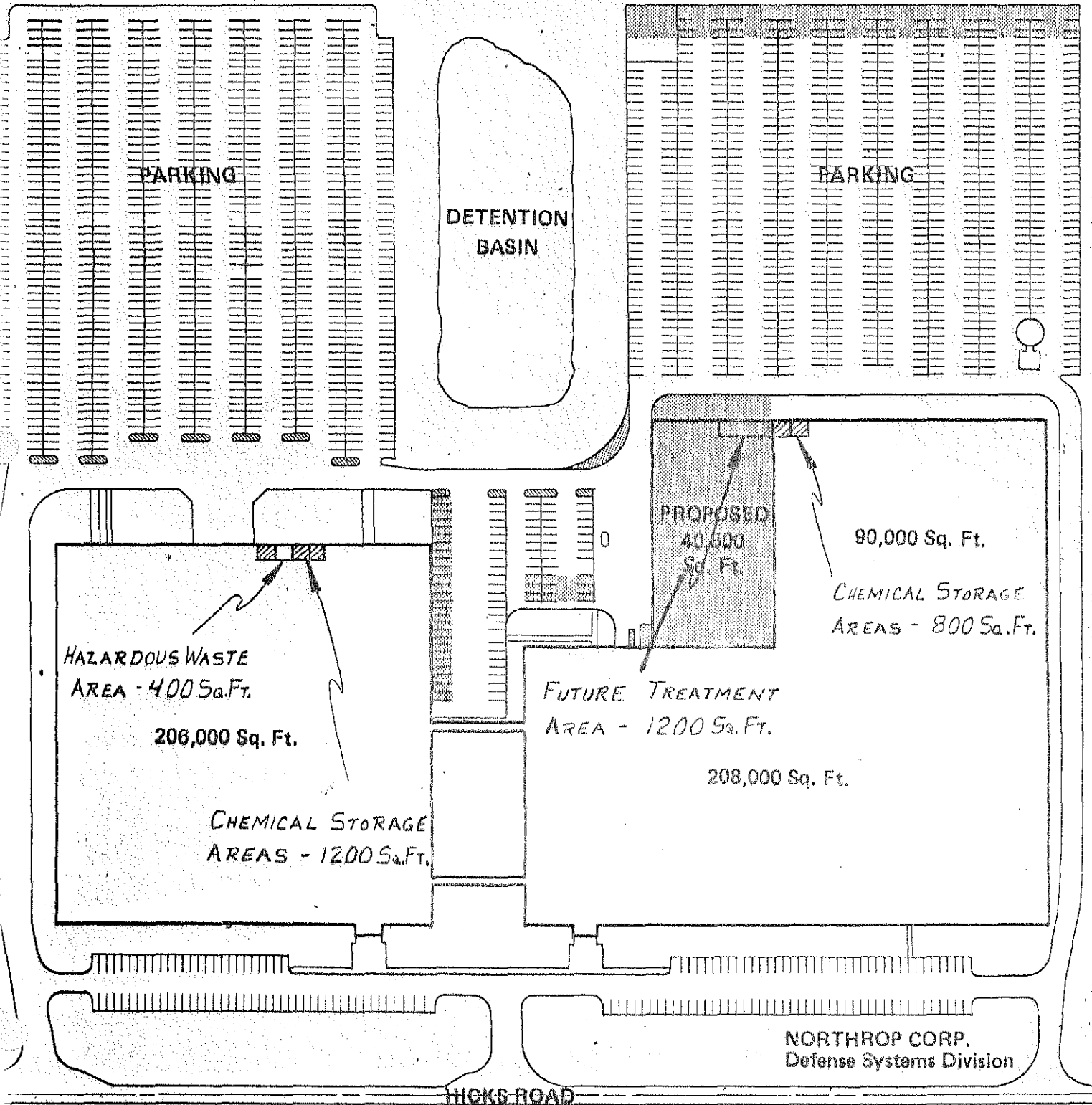
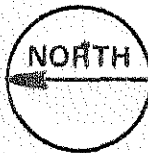
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type) John J. McNaughton Vice President, Financial Mgmt.	B. SIGNATURE 	C. DATE SIGNED 2/15/84
--	--	---------------------------

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED



5HW

FEB 24 1983

John J. McNaughton, Vice President
Northrop Corp. Defense Systems Division
600 Hicks Road
Rolling Meadows, Illinois 60008

RE: ILD 005128988

Dear Mr. McNaughton:

This is to acknowledge receipt of your amended Part A Permit Application of December 14, 1982. Your company has the approval of the United States Environmental Protection Agency to increase its hazardous waste container storage capacity from 5,811 gallons to 7,600 gallons. This approval is effective retroactively as of December 20, 1982.

In addition to this approval of your change during interim status, you must obtain the written approval of the Director of the Illinois Environmental Protection Agency in accordance with the provisions of Part 700.105 (c) of the Illinois hazardous waste regulations. Further, since the State of Illinois has received Phase I Interim Authorization under §3005 of the Resource Conservation and Recovery Act, you are required to comply with Part 725 of the Illinois hazardous waste regulations in lieu of the Federal regulations at 40 CFR Part 265. Operation under interim status does not relieve you of the need to comply with other applicable Federal, State and local requirements.

Please contact Mr. Greg Weber of my staff, at (312) 886-3719, if you have any questions regarding this matter.

Sincerely,

Basil B. Constantelos, Director
Waste Management Division

cc: Tom E. Cavanagh, Jr., IEPA

5HW:G.WEBER:ad 2/14/83 Disk #5 No. 5 ad

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE:

SUBJECT: Ammendment to Part A Permit Application. Northrop Corp. Rolling Meadows, Illinois

FROM: Karl J. Klepitsch, Jr., Chief
Waste Management Branch

TO: B.G. Constantelos, Director
Waste Management Division

1. Background: Increased business activity at this facility has increased production to the extent that more hazardous waste is being generated.
2. Part A change requested: The company wants to increase its container process design capacity from 5811 gallons to 7,600 gallons.
3. Results of proposed changes: This change will allow the company to store an increase of 1789 gallons of hazardous waste.
4. Additional information: This is a minor change to an existing facility.
5. Does the change constitute reconstruction as defined in 40 CFR 122.23(c)(5)? Answer: No
6. Does the facility have interim status? Answer: Yes
7. Recommendation: The company should be allowed to increase its container storage capacity.
8. Justification: 40 CFR 122.23(c)(2) allows an increase in design capacity because of a lack of available storage capacity.

References:

1. EPA identification number: ILD 005128988

WKM 2/15/83

2. Notification:

Date: August 18, 1980
Waste Activities: G, TSD

3. Part A application:

Date: November 18, 1980
Design Processes: 601 *S*
Process Design Capacity: 5811G *space*

4. Revised Part A application

Date: December 14, 1982
Design Processes: Sol *O*
Process Design Capacity: 7600 G

FORM 1 GENERAL	 EPA GTSB PA	ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION Consolidated Permits Program <i>(Read the "General Instructions" before starting.)</i>	I. EPA I.D. NUMBER <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%;">1</td><td style="width:10%;">2</td><td style="width:10%;">3</td><td style="width:10%;">4</td><td style="width:10%;">5</td><td style="width:10%;">6</td><td style="width:10%;">7</td><td style="width:10%;">8</td><td style="width:10%;">9</td><td style="width:10%;">10</td><td style="width:10%;">11</td><td style="width:10%;">12</td><td style="width:10%;">13</td><td style="width:10%;">14</td><td style="width:10%;">15</td> </tr> <tr> <td>I</td><td>L</td><td>D</td><td>0</td><td>0</td><td>5</td><td>1</td><td>2</td><td>8</td><td>9</td><td>8</td><td>8</td><td></td><td></td><td></td> </tr> </table>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	I	L	D	0	0	5	1	2	8	9	8	8			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15																			
I	L	D	0	0	5	1	2	8	9	8	8																						
II. POLLUTANT CHARACTERISTICS INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.		<div style="border: 2px solid black; padding: 10px; width: 150px; margin: 0 auto;"> RECEIVED DEC 20 1982 WASTE MANAGEMENT BRANCH EPA REGION V </div>																															
III. FACILITY NAME V. FACILITY MAILING ADDRESS VI. FACILITY LOCATION		<div style="border: 2px solid black; padding: 10px; width: 150px; margin: 0 auto;"> RECEIVED DEC 20 1982 WASTE MANAGEMENT BRANCH EPA REGION V </div>																															

SPECIFIC QUESTIONS	MARK "X"			SPECIFIC QUESTIONS	MARK "X"		
	YES	NO	FORM ATTACHED		YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X		B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X		D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X			F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY	1 SKIP NORTHROP CORP. DEFENSE SYSTEMS DIVISION
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IV. FACILITY CONTACT	A. NAME & TITLE (last, first, & title) 2 SWETONIC ANTHONY FACIL. ENG. MGR	B. PHONE (area code & no.) 3 12 259 9600
-----------------------------	--	---

V. FACILITY MAILING ADDRESS	A. STREET OR P.O. BOX 3 600 HICKS ROAD B. CITY OR TOWN 4 ROLLING MEADOWS C. STATE 5 IL D. ZIP CODE 6 60008
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VI. FACILITY LOCATION	A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER 5 600 Hicks Road B. COUNTY NAME 6 COOK C. CITY OR TOWN 7 ROLLING MEADOWS D. STATE 8 IL E. ZIP CODE 9 60008 F. COUNTY CODE (if known) 10
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VII. SIC CODES (4-digit, in order of priority)

A. FIRST				B. SECOND			
7	3	6	7	7			
(specify) HAZARDOUS WASTES				(specify)			
C. THIRD				D. FOURTH			
7				7			
(specify)				(specify)			

VIII. OPERATOR INFORMATION

A. NAME										B. Is the name of the owner?	
NORTHROP CORP. DEFENSE SYSTEMS DIVISION										<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)										D. PHONE (area code & no.)	
F = FEDERAL		M = PUBLIC (other than federal or state)		P (specify)		A		3 1 2		2 5 9	
S = STATE		O = OTHER (specify)								9 60	
P = PRIVATE											
E. STREET OR P.O. BOX											
600 HICKS ROAD											
F. CITY OR TOWN					G. STATE		H. ZIP CODE		IX. INDIAN LAND		
ROLLING MEADOWS					IL		60008		Is the facility located on Indian land?		
									<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)										D. PSD (Air Emissions from Proposed Sources)									
DNA										DNA									
B. UIC (Underground Injection of Fluids)										E. OTHER (specify)									
DNA										DNA									
C. RCRA (Hazardous Wastes)										F. OTHER (specify)									
DNA										DNA									

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

ELECTRONIC COUNTER MEASURES - DEFENSE SYSTEMS

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)		B. SIGNATURE		C. DATE SIGNED	
JOHN J. MC NAUGHTON				Dec. 14, 1982	
VICE PRESIDENT, FINANCIAL MANAGEMENT					

COMMENTS FOR OFFICIAL USE ONLY

FORM 3 RCRA		ENVIRONMENTAL PROTECTION AGENCY HAZARDOUS WASTE PERMIT APPLICATION <i>Consolidated Permits Program</i> <small>(This information is required under Section 3005 of RCRA.)</small>	I. EPA I.D. NUMBER														
			F 1 L D 0 0 5 1 2 8 9 8 8														
			1 2 3 4 5 6 7 8 9 10 11 12 13 14 15														

FOR OFFICIAL USE ONLY																			
APPLICATION APPROVED					DATE RECEIVED (yr., mo., & day)					COMMENTS									
X					0 4 1 6 8 2														

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION (place an "X" below and provide the appropriate date)

☐ 1. EXISTING FACILITY (See instructions for definition of "existing" facility. Complete item below.)

YR.	MO.	DAY
73	74	75

FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the boxes to the left)

☐ 2. NEW FACILITY (Complete item below.)

YR.	MO.	DAY
73	74	75

FOR NEW FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION (place an "X" below and complete Item I above)

☒ 1. FACILITY HAS INTERIM STATUS

☐ 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES - CODES AND DESIGN CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process (including its design capacity) in the space provided on the form (Item III-C).

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc.)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET (the volume that would cover one acre to a depth of one foot) OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U

UNIT OF MEASURE	UNIT OF MEASURE CODE
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H

UNIT OF MEASURE	UNIT OF MEASURE CODE
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING ITEM III (shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

S T/A C C DUP 1																									
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15																									
LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY										FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY										FOR OFFICIAL USE ONLY
		1. AMOUNT (specify)					2. UNIT OF MEASURE (enter code)								1. AMOUNT					2. UNIT OF MEASURE (enter code)					
X-1	S 0 2	600					G						5												
X-2	T 0 3	20					E						6												
1	S 0 1	7600					G						7												
2													8												
3													9												
4													10												

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "T04"): FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER — Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY — For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE — For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE CODE
POUNDS P
TONS T

METRIC UNIT OF MEASURE CODE
KILOGRAMS K
METRIC TONS M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES**1. PROCESS CODES:**

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER — Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV (shown in line numbers X-1, X-2, X-3, and X-4 below) — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

W Z O Z	A. EPA HAZARD WASTE NO (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEA- SURE (enter code)	D. PROCESSES	
				1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				included with above

EPA I.D. NUMBER (enter from page 1)													FOR OFFICIAL USE ONLY															
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 W I L D 0 0 5 1 2 8 9 8 8													16 17 18 19 20 21 22 23 24 25 26 W DUP															
DESCRIPTION OF HAZARDOUS WASTES (continued)																												
WASTE NO. (enter code)	A. EPA HAZARD WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES																					
							1. PROCESS CODES (enter)								2. PROCESS DESCRIPTION (if a code is not entered in D(1))													
23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	
1	F	0	0	3	5280	P								S	0	1											RECYCLED	
2	F	0	0	5																							INCLUDED WITH THE ABOVE	
3	F	0	0	2	10,000	P								S	0	1											RECYCLED	
4	F	0	0	1	40,000	P								S	0	1											RECYCLED	
5	F	0	0	7	10,000	P								S	0	1											RECYCLED	
6	P	0	2	9	540	P								S	0	1	0	8	0									
7	P	0	3	0																							INCLUDED WITH THE ABOVE	
8	P	1	0	4	1,650	P								S	0	1											RECYCLED	
9	U	1	5	1	15	P								S	0	1											RECYCLED	
10	D	0	0	1	7,920	P								S	0	1	0	8	0									
11	U	1	5	4																							INCLUDED WITH ABOVE	
12	F	0	0	6	3,600	P								S	0	1	0	8	0								RECYCLED	
13	D	0	0	7																							INCLUDED WITH ABOVE	
14																												
15																												
16																												
17																												
18																												
19																												
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21																												
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23																												
24																												
25																												
26																												

IV. DESCRIPTION OF HAZARDOUS WASTE (continued)**E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.**

EPA I.D. NO. (enter from page 1)

S	F	I	L	D	0	0	5	1	2	8	9	8	8	T/A	C
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility (see instructions for more detail).

VI. PHOTOGRAPHS

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE (degrees, minutes, & seconds)

4	2	4			
65	66	67	68	69	71

LONGITUDE (degrees, minutes, & seconds)

8	8				
72	74	75	76	77	79

VIII. FACILITY OWNER☒ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER

2. PHONE NO. (area code & no.)

3. STREET OR P.O. BOX

4. CITY OR TOWN

5. ST.

6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)

B. SIGNATURE

C. DATE SIGNED

☒ JOHN J. MC NAUGHTON

Dec. 14, 1982

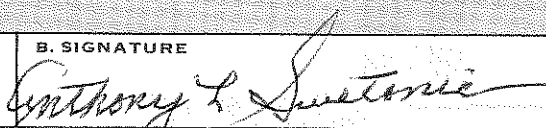
X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)

B. SIGNATURE

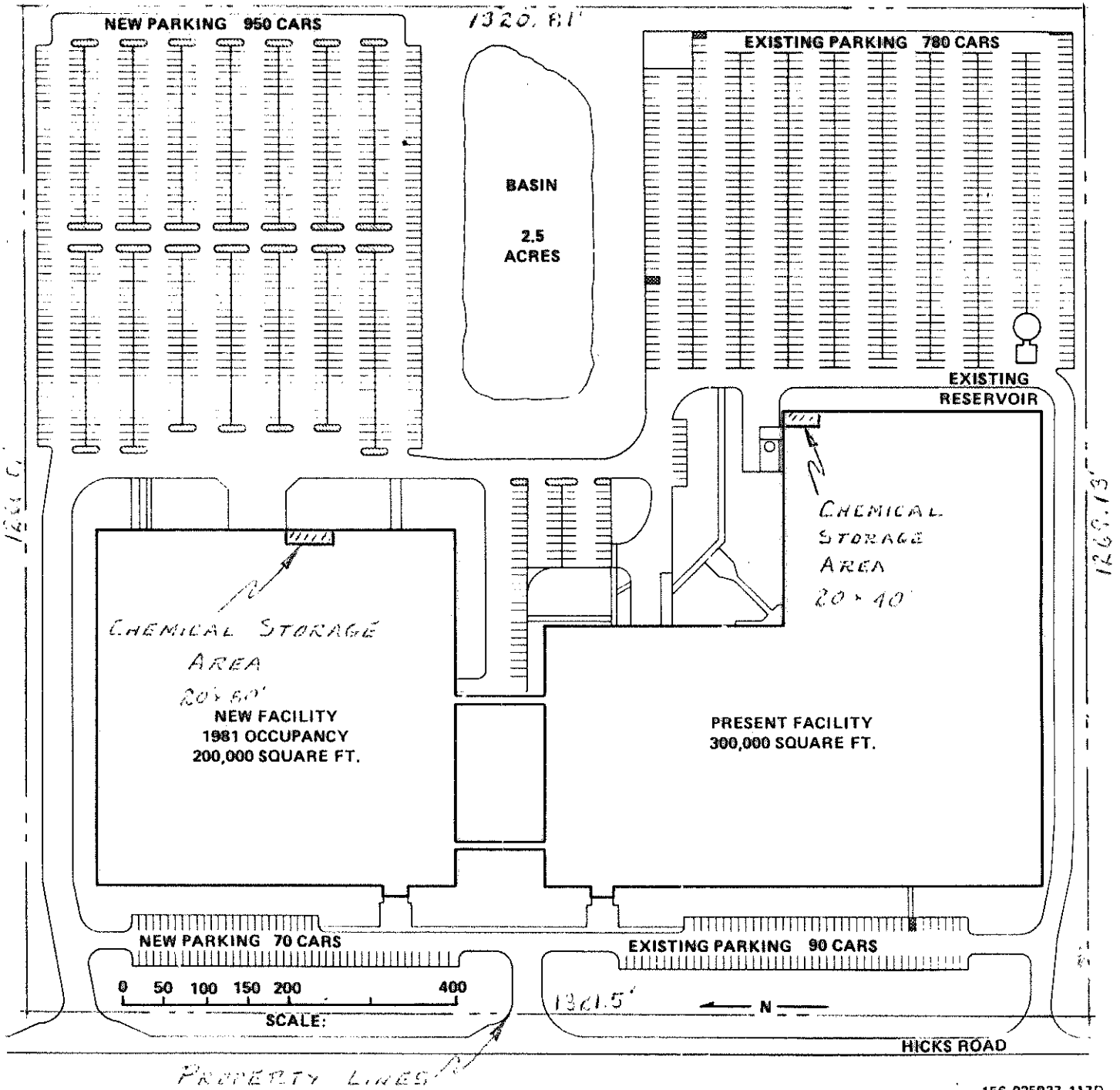
C. DATE SIGNED

☒ ANTHONY L. SWETONIC

Dec 14, 1982

NORTHROP PRIVATE

CORPORATE FACILITIES PLAN
IMPLEMENTATION PLOT PLAN



NORTHROP PRIVATE

156-025937-117D

FORM 1	U.S. ENVIRONMENTAL PROTECTION AGENCY EPA	GENERAL INFORMATION Consolidated Permits Program (Read the "General Instructions" before starting.)	I. EPA I.D. NUMBER F I L D 0 0 5 1 2 8 9 8 8 3 D
II. POLLUTANT CHARACTERISTICS INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.		GENERAL INSTRUCTIONS If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.	
PLEASE PLACE LABEL IN THIS SPACE			

SPECIFIC QUESTIONS	YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X		B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X		D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X			F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP NORTHROP CORP DEFENSE SYSTEMS DIVISION

IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
2 SWETONIC ANTHONY FACIL. ENG. MGR	312 259 9600

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX	B. CITY OR TOWN
3 600 Hicks Road	ROLLING MEADOWS
C. STATE D. ZIP CODE	
IL 60008	

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER	B. COUNTY NAME
5 600 HICKS ROAD	COOK
C. CITY OR TOWN	D. STATE E. ZIP CODE F. COUNTY CODE (if known)
6 ROLLING MEADOWS	IL 60008 031

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)

A. FIRST

7 3 6 7 9 (specify)
HAZARDOUS WASTES

B. SECOND

(specify)

C. THIRD

(specify)

D. FOURTH

(specify)

VIII. OPERATOR INFORMATION

A. NAME

8 NORTHROP CORP DEFENSE SYSTEMS DIVISION

B. Is the name listed in Item VII-A also the owner?

☒ YES ☐ NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)

F - FEDERAL
S - STATE
P - PRIVATEM - PUBLIC (other than federal or state)
O - OTHER (specify)

P (specify)

D. PHONE (area code & no.)

3 1 2 2 5 9 9 6 0 0

E. STREET OR P.O. BOX

6 0 0 HICKS ROAD

F. CITY OR TOWN

B ROLLING MEADOWS

G. STATE

I L

H. ZIP CODE

6 0 0 0 8

IX. INDIAN LAND

Is the facility located on Indian lands?

☐ YES ☒ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)

9 N D N A

D. PSD (Air Emissions from Proposed Sources)

9 P D N A

B. UIC (Underground Injection of Fluids)

9 U D N A

E. OTHER (specify)

(specify)

C. RCRA (Hazardous Wastes)

9 R D N A

E. OTHER (specify)

(specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

F9:B/50

XII. NATURE OF BUSINESS (provide a brief description)

ELECTRONIC COUNTER MEASURES - DEFENSE SYSTEMS

F9:B/51

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)

J.J. McNaughton
Vice President Financial Mgr.

B. SIGNATURE

J.J. McNaughton

C. DATE SIGNED

11-18-80

COMMENTS FOR OFFICIAL USE ONLY

FORM 3 RCRA		U.S. ENVIRONMENTAL PROTECTION AGENCY HAZARDOUS WASTE PERMIT APPLICATION Consolidated Permits Program (This information is required under Section 3005 of RCRA.)	I. EPA I.D. NUMBER									
			F I L D 0 0 5 1 2 8 9 8 8 3 1									

FOR OFFICIAL USE ONLY		COMMENTS
APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	
23	24 - 29	

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION (place an "X" below and provide the appropriate date)		2. NEW FACILITY (Complete item below.)	
<input checked="" type="checkbox"/> 1. EXISTING FACILITY (See instructions for definition of "existing" facility. Complete item below.)		<input type="checkbox"/> 2. NEW FACILITY (Complete item below.)	
FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the boxes to the left)		FOR NEW FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN	
YR. MO. DAY 67 01 67		YR. MO. DAY 75 76 77 78	
B. REVISED APPLICATION (place an "X" below and complete Item I above)		2. FACILITY HAS A RCRA PERMIT	
<input type="checkbox"/> 1. FACILITY HAS INTERIM STATUS		<input type="checkbox"/> 2. FACILITY HAS A RCRA PERMIT	

III. PROCESSES - CODES AND DESIGN CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process (including its design capacity) in the space provided on the form (Item III-C).

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PRO- CESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	PROCESS	PRO- CESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:			Treatment:		
CONTAINER (barrel, drum, etc.)	S01	GALLONS OR LITERS	TANK	T01	GALLONS PER DAY OR LITERS PER DAY
TANK	S02	GALLONS OR LITERS	SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS	INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS	OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY
Disposal:					
INJECTION WELL	D79	GALLONS OR LITERS			
LANDFILL	D80	ACRE-FEET (the volume that would cover one acre to a depth of one foot) OR HECTARE-METER			
LAND APPLICATION	D81	ACRES OR HECTARES			
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY			
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS			
UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE CODE
GALLONS	G	LITERS PER DAY	V	ACRE-FEET	A
LITERS	L	TONS PER HOUR	D	HECTARE-METER	F
CUBIC YARDS	Y	METRIC TONS PER HOUR	W	ACRES	B
CUBIC METERS	C	GALLONS PER HOUR	E	HECTARES	Q
GALLONS PER DAY	U	LITERS PER HOUR	H		

EXAMPLE FOR COMPLETING ITEM III (shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

S C DUP T/A/C 3/1									
1 2 3 4 5 6 7 8 9 10									
LINE NUMBER	A. PRO- CESS CODE (from list above)	B. PROCESS DESIGN CAPACITY		FOR OFFICIAL USE ONLY	LINE NUMBER	A. PRO- CESS CODE (from list above)	B. PROCESS DESIGN CAPACITY		FOR OFFICIAL USE ONLY
		1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)				1. AMOUNT	2. UNIT OF MEASURE (enter code)	
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 1	5811 0 0 0	G		7				
2					8				
3					9				
4					10				

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES () FOR DESCRIBING OTHER PROCESSES (code "T0") FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER — Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY — For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE — For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES**1. PROCESS CODES:**

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER — Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV (shown in line numbers X-1, X-2, X-3, and X-4 below) — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Waste No. X-1 X-2 X-3 X-4	A. EPA HAZARD. WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES	
							1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K	0	5	4	900	P	T 0 3 D 8 0	
X-2	D	0	0	2	400	P	T 0 3 D 8 0	
X-3	D	0	0	1	100	P	T 0 3 D 8 0	
X-4	D	0	0	2				included with above

EPA I.D. NUMBER (enter from page 1)													FOR OFFICIAL USE ONLY												
W I L D 0 0 5 1 2 8 9 8 8 3 1													W 1 2 DUP 3 2 DUP												
V. DESCRIPTION OF HAZARDOUS WASTES (continued)																									
LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE				C. UNIT OF MEASURE (enter code)	D. PROCESSES															
										1. PROCESS CODES (enter)								2. PROCESS DESCRIPTION (if a code is not entered in D(1))							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
1	F	0	0	3						P															
2	F	0	0	1						P															
3	P	0	3	0						P															
4	P	1	0	4						P															
5	U	1	5	1						P															
6	D	0	0	1						P															
7	U	1	5	4																					
8	D	0	0	7						P															
9																									
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26																									

IV. DESCRIPTION OF HAZARDOUS WASTE (continued)**E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 1.**

EPA I.D. NO. (enter from page 1)															
F	I	L	D	0	0	5	1	2	8	9	8	8	3	6	
													T/A	C	
													13	14	15

V. FACILITY DRAWINGAll existing facilities must include in the space provided on page 5 a scale drawing of the facility (see instructions for more detail). **F6:A/55****VI. PHOTOGRAPHS**All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail). **F6:B/56****VII. FACILITY GEOGRAPHIC LOCATION**

LATITUDE (degrees, minutes, & seconds)

LONGITUDE (degrees, minutes, & seconds)

4	2	4			
65	66	67	68	69	71

8	8				
72	74	75	76	77	79

VIII. FACILITY OWNER☒ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER

2. PHONE NO. (area code & no.)

3. STREET OR P.O. BOX

4. CITY OR TOWN

5. ST.

6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)

B. SIGNATURE

C. DATE SIGNED

J.J. McNaughton
Vice President Financial Manag't



11-18-80

X. OPERATOR CERTIFICATION

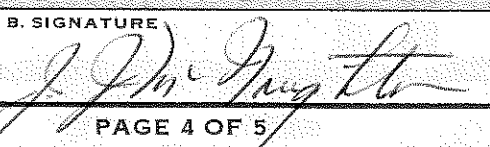
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)

B. SIGNATURE

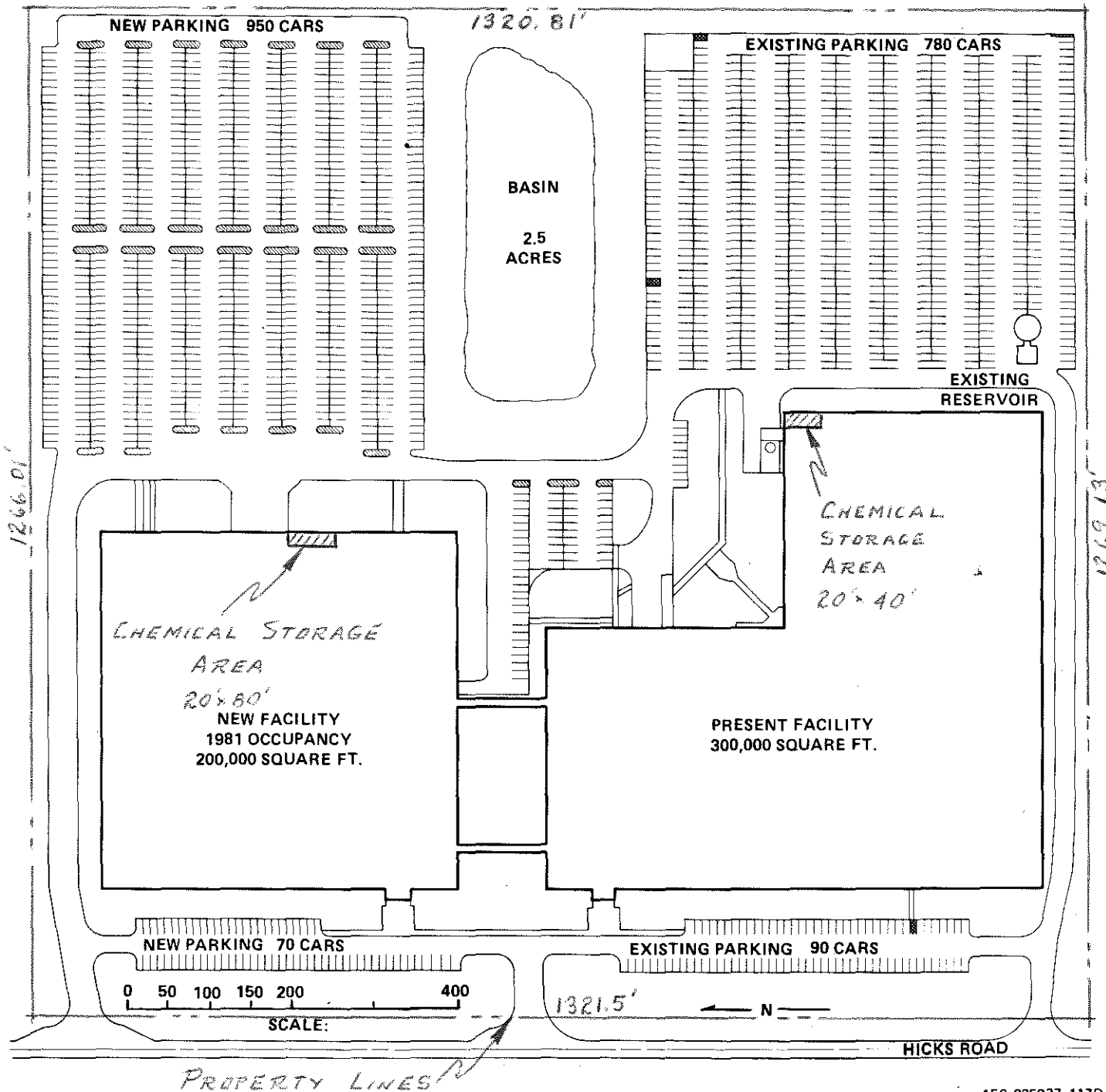
C. DATE SIGNED

J.J. McNaughton
Vice President Financial Manag't



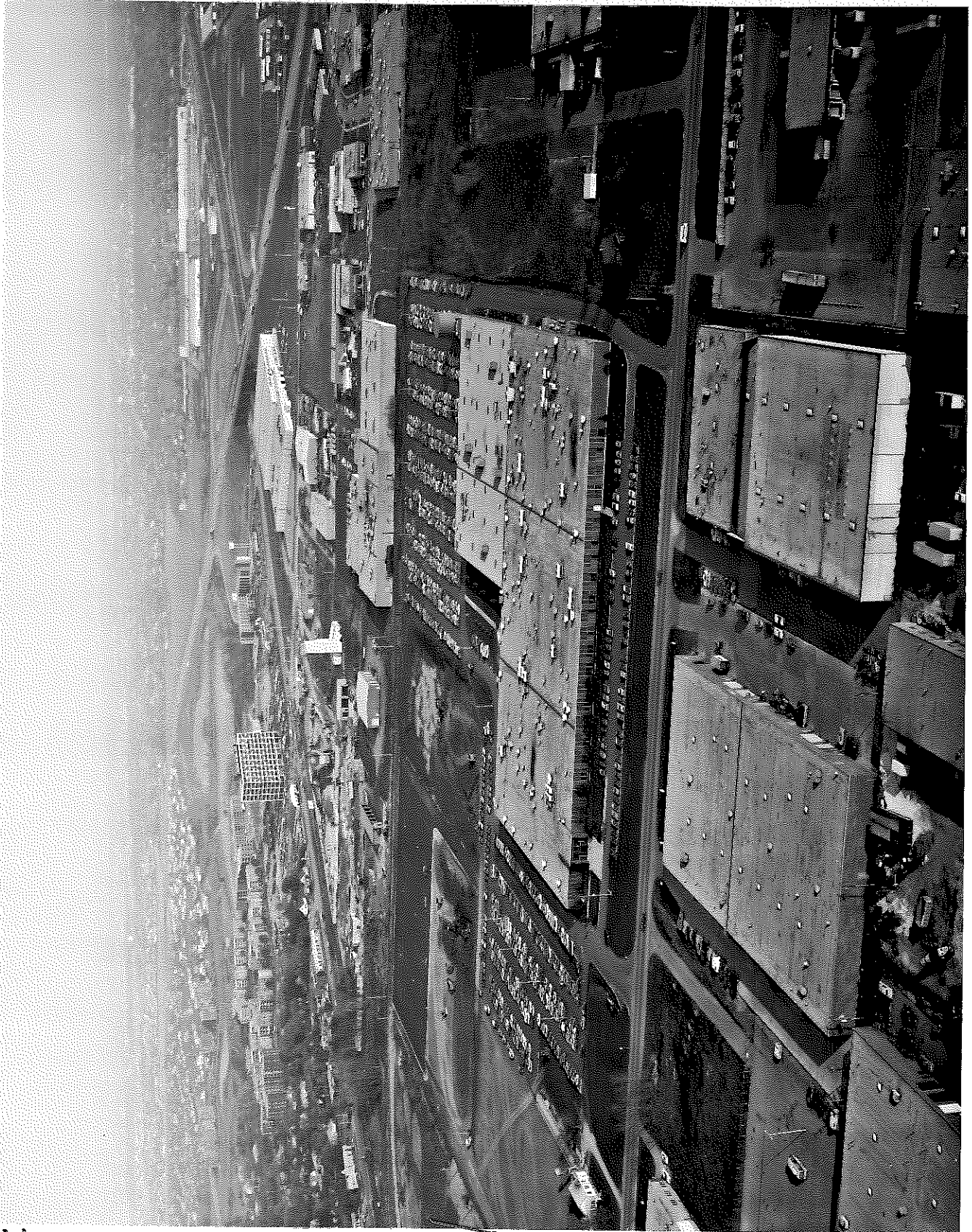
11-18-80

NORTHROP PRIVATE
CORPORATE FACILITIES PLAN
IMPLEMENTATION PLOT PLAN



NORTHROP PRIVATE

156-025937-117D



JAN 10 1984

5HW-12

Mr. J.J. McNaughton
Vice President, Financial Management
Northrop Corporation
Defense Systems Division
600 Hicks Road
Rolling Meadows, Illinois 60009

Re: Part A Permit Application
IL D 005128982

Dear Mr. McNaughton:

Thank you for your letter of December 16, 1983, notifying U.S. Environmental Protection Agency (U.S. EPA) of the proposed expansion of your facility's hazardous waste treatment capacity. Please be advised that increases in the design capacity of hazardous waste processes, for interim status facilities, may be made only if a revised Part A permit application is submitted prior to such changes (along with a justification explaining the need for the changes) and the changes are approved by U.S. EPA - 40 CFR 6270.71. Enclosed is an application package which may be used to update your Part A permit application.

Please contact Mr. Gale Hruska of my staff, at (312) 826-0989, if you have any questions concerning the revision to your permit application. We will process your request for an increase hazardous waste treatment capacity upon receipt of your revised Part A permit application.

Sincerely yours,

ORIGINAL SIGNED BY
WILLIAM H. MINER

William H. Miner, Chief
Technical, Permits, and Compliance Section

Enclosure

cc: Lawrence Eastep, IEPA

5HW:G.HRUSKA:ns:1/5/84

INITIALS	DATE	TYPYST	AUTHOR	STU #1 CHIEF	STU #2 CHIEF	STU #3 CHIEF	TPS CHIEF	WMB CHIEF	WMD DIRECTOR
	1/5/84	NS 1/6/84	↑	DEH 1/6/84 Acting for HW			ONE 1484 WMB 1/9/84		

SHW

FEB 24 1983

John J. McNaughton, Vice President
Northrop Corp. Defense Systems Division
600 Hicks Road
Rolling Meadows, Illinois 60008

RE: ILD 005128988

Dear Mr. McNaughton:

This is to acknowledge receipt of your amended Part A Permit Application of December 14, 1982. Your company has the approval of the United States Environmental Protection Agency to increase its hazardous waste container storage capacity from 5,811 gallons to 7,600 gallons. This approval is effective retroactively as of December 20, 1982.

In addition to this approval of your change during interim status, you must obtain the written approval of the Director of the Illinois Environmental Protection Agency in accordance with the provisions of Part 700.105 (c) of the Illinois hazardous waste regulations. Further, since the State of Illinois has received Phase I Interim Authorization under 63005 of the Resource Conservation and Recovery Act, you are required to comply with Part 725 of the Illinois hazardous waste regulations in lieu of the Federal regulations at 40 CFR Part 265. Operation under interim status does not relieve you of the need to comply with other applicable Federal, State and local requirements.

Please contact Mr. Greg Weber of my staff, at (312) 886-3719, if you have any questions regarding this matter.

Sincerely,

Basil G. Constantelos, Director
Waste Management Division

cc: Tom E. Cavanagh, Jr., IEPA

SHW:G.WEBER:ad 2/14/83 Disk #5 No5 line ad

INITIALS
DATE
TYPIST
A.D.
2-14-83

GW
2-14-83
2/15/83

Dir 2/15/83
Tres Chief
2/16
2/17/83
2/15/83
2/23/83
AAMD DIRECTOR

Northrop Corporation

Defense Systems Division

NORTHROP

600 Hicks Road
Rolling Meadows, Illinois 60008

Telephone: 312/259-9600
TWX: 910/687-3785

RECEIVED

NOV 1 1981

WASTE MANAGEMENT BRANCH
EPA REGION V

October 27, 1981

United States
Environmental Protection Agency
Region V
Diane Parker
230 So. Dearborn
Chicago, Il. 60604

Dear Miss Parker:

In response to your questions on Oct. 26, 1981, concerning the submittal of E.P.A. forms by the Northrop Corporation in Rolling Meadows, the following corrections should be made.

On the reverse side of Form 1, Section VIII A, the facility operator is the same as facility owner. On Form 3, Section IV, the process code should read SO 1 instead of O80 as indicated on form.

We appreciate having the two omissions called to our attention, please do not hesitate to contact us if further information is required.

Yours truly,



Anthony L. Swetonic
Facilities Manager
Northrop Corp.

dp



Art Hawatachi

217/782-6762

Refer to: 0312730002 -- Cook County
Northrop Corporation

Closure Plan Approved: March 9, 1987

ILD005128988

RCRA-Closure

Log #C-295

Log # A-133

December 21, 1987

Northrop Corporation
600 Hicks Road
Rolling Meadows, Illinois 60008-1098

Dear Mr. Langlois:

The closure plan modification and certification submitted by Northrop Corporation has been reviewed and approved by this Agency.

The subject hazardous waste management facility was inspected by a representative of this Agency on November 2, 1987. The inspection revealed that the closure activity was completed in accordance with the approved closure plan.

Certification that the container storage areas (S01) have been closed in accordance with the approved closure plan by the owner/operator, Robert Langlois, and the independent registered professional engineers, George E. Heck and Donald R. Schwegel, of Illinois was received at this Agency October 22, 1987.

The Agency has determined that the closure of the container storage areas has apparently met the requirements of Interim Status Standards, 35 Ill. Admin. Code, Part 725 (40 CFR, Part 265). Please note, the Agency has withdrawn your Part A application dated December 14, 1982 to reflect the status change due to completed closure activities.

This facility must continue to meet the requirements of 35 IAC Section 722 - Standards Applicable to Generators of Hazardous Waste.

In accordance with the requirements of 35 IAC 725.243(h), further maintenance of certain financial assurance mechanisms is no longer needed. Therefore, this Agency herewith returns the Surety Bond dated August 19, 1985.

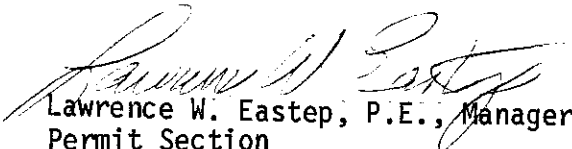
*Changes will be
submitted to
Data Entry
1/7 m.v.*



Page 2

If you have any questions, please contact Karen Nachtwey at 217/782-0892.

Very truly yours,


Lawrence W. Eastep, P.E., Manager
Permit Section
Division of Land Pollution Control

LWE:KEN:sls/4391g,59-60

cc: Maywood Region
USEPA Region V, Mary Murphy
USEPA Region V, Art Kawatachi
Baxter & Woodman, P.E.
Division File
Financial Assurance Unit
Compliance Monitoring

NORTHROP

1LD 000627273
RECEIVED
JAN 28 1983

**WASTE MANAGEMENT
BRANCH**

January 25, 1983

USEPA, Region V
Waste Management Branch
230 S. Dearborn Street
Chicago, IL. 60604

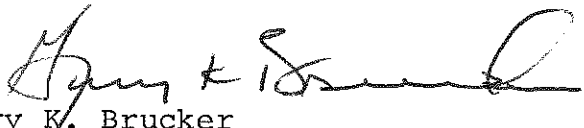
RE: Closure/Post Closure
Financial Guarantee

Gentlemen:

In compliance with Federal Law, we enclose Bond #KO-1048089-30 guarantying our financial obligation under the Resource Conservation and Recovery Act (RCRA). The bond provides coverage for Northrop's Defense Systems Division, site location: 600 Hicks Rd., Rolling Meadows, IL.

Very truly yours,

NORTHROP CORPORATION


Gary K. Brucker
Corporate Administrator
Risk Management

GKB/mbh
Encl.

cc: T. McCabe

RECEIVED
JAN 28 1983

**WASTE MANAGEMENT
BRANCH**

FINANCIAL GUARANTEE BOND

DATE BOND EXECUTED: 1/12/83

EFFECTIVE DATE: 10/1/82

PRINCIPAL: NORTHROP CORPORATION
1800 Century Park East
ADDRESS: Los Angeles, CA 90067

TYPE OF ORGANIZATION: CORPORATION

STATE OF INCORPORATION: CALIFORNIA

SURETY: INSURANCE COMPANY OF NORTH AMERICA
5757 Wilshire Blvd.
Los Angeles, CA 90036

<u>EPA. ID NO.</u>	<u>NAME & ADDRESS</u>	<u>PENAL SUM</u>
ILD000627273	DEFENSE SYSTEMS DIVISION of NORTHROP CORPORATION 600 Hicks Rd. Rolling Meadows, Illinois	\$15,000-TOTAL

KNOW ALL PERSONS BY THESE PRESENTS, That we, the Principal and Surety hereto are firmly bound to the U.S. Environmental Protection Agency (hereinafter called EPA), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally; provided that, where the Sureties are corporations acting as co-sureties, we, the Sureties bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

WHEREAS, said Principal is requires, under the Resource Conservation and Recovery Act as amended (RCRA), to have a permit or interim status in order to own or operate each hazardous waste management facility identified above, and

WHEREAS, said Principal is required to provide financial assurance for closure, or closure and post-closure care, as a condition of the permit or interim status, and

WHEREAS, said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

NOW, THEREFORE, the conditions of the obligation are such that if the Principal shall faithfully, before the beginning of final closure of The Facility identified above, fund the standby trust fund in the amount(s) identified above for the facility,

Or, if the Principal shall fund the standby trust fund in such amount(s) within 15 days after an order to begin closure is issued by an EPA Regional Administrator, or a U. S. district court or other court or competent jurisdiction,

OR, if the Principal shall provide alternate financial assurance as specified Subpart H of 40 CFR part 264 or 265, as applicable, and obtain the EPA Regional Administrator's written approval of such assurance within 90 days after the date notice of cancellation is received by both the Principal and the EPA Regional Administrator from the Surety, then this obligation shall be null and void, otherwise it is to remain in full force and effect.

THE Surety shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

UPON NOTIFICATION by an EPA Regional Administrator that the Principal has failed to perform as guaranteed by this bond the Surety shall place funds in the amount guaranteed for the facility into the standby trust fund as directed by the EPA Regional Administrator.

THE LIABILITY of the Surety shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety hereunder exceed the amount of said penal sum.

THE SURETY may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the EPA Regional Administrator for the Region in which the Facility is located provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by both the Principal and the EPA Regional Administrator, as evidenced by the return receipts.

THE PRINCIPAL may terminate this bond by sending written notice to the Surety provided, however, that no such notice shall become effective until the Surety receive(s) written authorization for termination of the bond by the EPA Regional Administrator of the EPA's region(s) in which the bonded facility is located.

IN WITNESS WHEREOF, the Principal and Surety have executed this Financial Guarantee Bond and have affixed their seals on the date set forth above.

THE PERSONS whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety and that the wording of this Surety Bond is identical to wording specified in 40 CFR 264.151(b) as such regulations were constituted on the date this bond was executed.

WITNESS our hands and seals this 12th day of January, 19 83.

ATTEST: _____ NORTHROP CORPORATION (SEAL)
(Principal)

BY: _____

INSURANCE COMPANY OF NORTH AMERICA
5757 WILSHIRE BLVD., LOS ANGELES, CA 90036

BY: _____
(Corporate Surety)
And Address

BY:  _____

Wallace C. Doyle, Attorney-in-fact
In excess of \$75,000,000

LIABILITY LIMITS: (See Federal Register)

STATE OF INCORPORATION: PENNSYLVANIA

ANNUAL PREMIUM: \$113.00

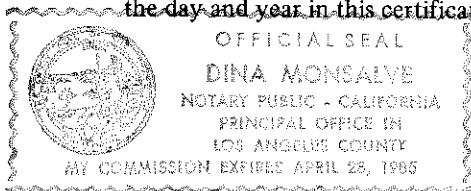
ACKNOWLEDGMENT BY SURETY

STATE OF CALIFORNIA

County of Los Angeles } ss.

On this 12th day of January, 1983, before me, Dina Monsalve,
a notary public in and for the State of California with principal office in the County of Los Angeles,
residing therein, duly commissioned and sworn, personally appeared Wallace C. Doyle,
known to me to be the person whose name is subscribed to the within instrument as the attorney-in-fact of the INSURANCE COMPANY OF NORTH AMERICA,
the corporation named as Surety in said instrument, and acknowledged to me that he subscribed the name of said corporation
thereto as Surety, and his own name as attorney-in-fact.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, at my office in the aforesaid County,
~~the day and year in this certificate first above written.~~



(seal)

Dina Monsalve
Notary Public

INSURANCE COMPANY OF NORTH AMERICA

PHILADELPHIA, PA.

Know all men by these presents: That INSURANCE COMPANY OF NORTH AMERICA, a corporation of the Commonwealth of Pennsylvania, having its principal office in the City of Philadelphia, Pennsylvania, pursuant to the following Resolution adopted by the Board of Directors of the said Company on May 28, 1975, to wit:

"RESOLVED, pursuant to Articles 3.6 and 5.1 of the By-Laws, the following Rules shall govern the execution for the Company of bonds, undertakings, recognizances, contracts and other writings in the nature thereof:

(1) That the President, or any Vice-President, Assistant Vice-President, Resident Vice-President or Attorney-in-Fact, may execute for and in behalf of the Company any and all bonds, undertakings, recognizances, contracts and other writings in the nature thereof, the same to be attested when necessary by the Secretary, an Assistant Secretary or a Resident Assistant Secretary and the seal of the Company affixed thereto; and that the President or any Vice-President may appoint and authorize Resident Vice-Presidents, Resident Assistant Secretaries and Attorneys-in-Fact to so execute or attest to the execution of all such writings on behalf of the Company and to affix the seal of the Company thereto.

(2) Any such writing executed in accordance with these Rules shall be as binding upon the Company in any case as though signed by the President and attested by the Secretary.

(3) The signature of the President or a Vice-President and the seal of the Company may be affixed by facsimile on any power of attorney granted pursuant to this Resolution, and the signature of a certifying officer and the seal of the Company may be affixed by facsimile to any certificate of any such power, and any such power or certificate bearing such facsimile signature and seal shall be valid and binding on the Company.

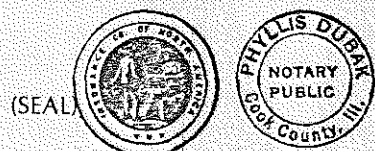
(4) Such Resident Officers and Attorneys-in-Fact shall have authority to certify or verify copies of this Resolution, the By-Laws of the Company, and any affidavit or record of the Company necessary to the discharge of their duties.

(5) The passage of this Resolution does not revoke any earlier authority granted by Resolution of the Board of Directors on June 9, 1953."

does hereby nominate, constitute and appoint WALLACE C. DOYLE, of the City of Los Angeles, State of California _____

_____, each individually if there be more than one named, its true and lawful attorney-in-fact, to make, execute, seal and deliver on its behalf, and as its act and deed any and all bonds, undertakings, recognizances, contracts and other writings in the nature thereof. And the execution of such writings in pursuance of these presents, shall be as binding upon said Company, as fully and amply as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its principal office.

IN WITNESS WHEREOF, the said MICHAEL B. FODOR, Vice-President, has hereunto subscribed his name and affixed the corporate seal of the said INSURANCE COMPANY OF NORTH AMERICA this 25th day of June 1981.



INSURANCE COMPANY OF NORTH AMERICA

Michael B. Fodor
MICHAEL B. FODOR Vice-President

STATE OF ILLINOIS
COUNTY OF COOK

} ss.

On this 25th day of June, A. D. 1981, before me, a Notary Public of the STATE OF ILLINOIS in and for the County of COOK came MICHAEL B. FODOR

MICHAEL B. FODOR, Vice-President of the INSURANCE COMPANY OF NORTH AMERICA to me personally known to be the individual and officer who executed the preceding instrument, and he acknowledged that he executed the same; that the seal affixed to the preceding instrument is the corporate seal of said Company; that the said corporate seal and his signature were duly affixed by the authority and direction of the said corporation, and that Resolution, adopted by the Board of Directors of said Company, referred to in the preceding instrument, is now in force.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal at the City of CHICAGO the day and year first above written.

Phyllis Dubak
PHYLLIS DUBAK Notary Public.

My commission expires 2/6/85

I, the undersigned, Assistant Secretary of INSURANCE COMPANY OF NORTH AMERICA, do hereby certify that the original POWER OF ATTORNEY, of which the foregoing is a full, true and correct copy, is in full force and effect.

In witness whereof, I have hereunto subscribed my name as Assistant Secretary, and affixed the corporate seal of the Corporation, this 12th day of January 1983.

James S. Wyllie
JAMES S. WYLLIE ~~XXXXXX~~ Secretary

Alexander & Alexander of California Inc.
3550 Wilshire Boulevard
Los Angeles, California 90010
Telephone 213 385-5211
TWX 910-321-2907

**Alexander
& Alexander**

July 6, 1982

Mr. Thomas B. Golz
U.S. Environmental Protection Agency
Region V
Waste Management Branch
230 S. Dearborn Street
Chicago, Illinois 60604

Mr. Tom Cavanagh
Division of Land Pollution Control, #24
2200 Churchill Road
Springfield, Illinois 62706

Gentlemen:

Please be advised that Alexander & Alexander, Inc., which is a duly licensed insurance broker and/or agent, is presently and will continue throughout the 90 day period commencing July 6, 1982 to diligently pursue closure/post-closure insurances, conforming to specifications of E.P.A. regulation with available qualified insurers, on behalf of Northrop Corporation, 1800 Century Park East, Los Angeles, California 90067.

Details of locations, E.P.A. numbers and estimates of closing costs provided by Northrop are enclosed.

Yours very truly,

ALEXANDER & ALEXANDER OF CALIFORNIA, INC.



Robert E. Rayfield
Assistant Vice President

cc: G. F. Curtis, Senior V.P.
ALEXANDER & ALEXANDER, INC.
1211 Avenue of the Americas
New York, New York 10026

enclosures

7/6/82

NORTHROP CORPORATION
1800 Century Park East
Los Angeles, CA. 90067

UNIT AND LOCATION/S

EPA NUMBER

EST. CLOSING
COST

DEFENSE SYSTEMS DIVISION
600 Hicks Road
Rolling Meadows, IL. 60008

ILD005128988

\$ 15,000



217/782-6767

Refer to: 0312730002 -- Cook County
Northrop Corp.
ILD005128908
RCRA - Permits

May 6, 1988

Northrop Corp.
600 Hicks Rd.
Rolling Meadows, Illinois 60006

Attn: Environmental Coordinator or
Plant Manager

Dear Sir:

According to Agency files, your facility currently manages hazardous waste in containers and/or tanks subject to the requirements of 35 IAC 700-725. 35 IAC 703.157(f) states that interim status for any hazardous waste storage or treatment facility will be terminated November 8, 1992, unless the facility submits Part B of the RCRA permit application for these units to this Agency by November 8, 1988. This letter is written to (1) make you aware of this requirement and (2) describe the actions which must be taken in response to this requirement.

According to 35 IAC 703.157(f), if an existing facility desires to (1) store hazardous waste on-site for greater than ninety (90) days, (2) treat hazardous waste, or (3) store hazardous waste as a commercial facility after November 8, 1992, it must submit Part B of the RCRA permit application to this Agency by November 8, 1988. The information which must be contained in this application is described in 35 IAC 703, Subpart D. The enclosed document, entitled "RCRA Permit Guidance" provides more detail regarding the necessary contents of the application and also identifies several guidance documents which will be useful in developing the application. Also included in this document is the form which must be used when submitting the application.

If a facility does not desire to continue storing and/or treating hazardous waste after November 8, 1992, it must close the storage and/or treatment unit(s) present at the facility prior to this date. Closure, in this instance, basically means that all contamination must be removed from the unit(s) and if necessary, from the area surrounding these units. The requirements which must be met in closing these units are contained in 35 IAC 725, Subpart G. For your convenience, guidance for the development of a closure plan is contained in the enclosed document entitled "Instructions for the Preparation of Closure Plans for Interim Status RCRA Hazardous Waste Facilities." PLEASE NOTE THAT A CLOSURE PLAN DOES NOT NEED TO BE SUBMITTED AT THIS TIME. IT MUST HOWEVER, BE SUBMITTED TO THE AGENCY NO LATER THAN MAY 8, 1992.



Page 2

In some instances, there may be several interim status hazardous waste management units at a facility. The facility may desire to pursue a final RCRA permit for a portion of these units and close the rest of them. Because of the uncertainty associated with this option, all interim status units at a facility must be included in Part B of the RCRA permit application, unless a closure plan for the units being closed is submitted with the Part B. If a closure plan is submitted with the Part B, the application need only address those units which will remain in operation.

The only alternatives available for hazardous waste treatment and storage facilities to meet the requirements of 35 IAC 703.157(f) are (1) submit Part B of the RCRA permit application by November 5, 1988 or (2) close by November 5, 1992. However, some facilities may have previously filed Part A of the RCRA permit application in error and now feel that the hazardous waste management activities carried out at the facility do not require a RCRA permit (i.e. the Part A was filed for protective measures). If this is the case, the Agency requests that information supporting this position be submitted no later than November 5, 1988. The Agency can then review the information submitted and correct its records accordingly. The information which must be submitted to make this demonstration is contained in the enclosed document entitled "Facility Part A Withdrawal Request Form."

Finally, some facilities may have closed or are currently closing in accordance with an IEPA approved closure plan. (Please bear in mind this letter is going out to over 200 facilities; some closed facilities may inadvertently receive this letter.) In this instance, the Agency requests that a copy of (1) the closure plan approval letter and (2) the letter from the Agency accepting the certifications of the owner/operator and the registered professional engineer that closure was carried out in accordance with the approved closure plan (if closure has been completed) be submitted by November 5, 1988. The Agency will again be able to review this information and correct its records accordingly.

Because of the large number of facilities subject to the requirements of 35 IAC 703.157(f), the Agency requests that all facilities receiving this letter complete the enclosed form entitled "RCRA Permit Information Form." The form has been developed such that it can be used by a facility falling into any of the five categories described above (pursuing a final permit, planning to close, pursuing a permit for only a portion of the interim status units and closing the other units, protective filers, closed in accordance with an IEPA approved closure plan). This form must be submitted to the Agency no later than November 5, 1988, along with all required attachments. Failure to do so may subject a facility to enforcement under State and/or Federal regulations and possible monetary penalties up to \$25,000 per day of noncompliance.



Page 3

The RCRA Permit Information Form and all required attachments must be submitted in triplicate (original and two (2) copies) to the following address:

Permit Section, RCRA Unit
Division of Land Pollution Control
Illinois Environmental Protection Agency
2200 Churchill Road
P.O. Box 19275
Springfield, IL 62794-9275

If you have any questions regarding this letter, please contact Jim Moore at 217/782-9875.

Very truly yours,

Lawrence H. Eastep, P.E., Manager
Permit Section
Division of Land Pollution Control

LHE:JKN:rd1313j/1314j

Enclosures

cc: Division File
Compliance
Maywood Region
USEPA Region V

RECEIVED

JUN 21 1982

WASTE MANAGEMENT BRANCH
EPA REGION V

217/782-6760

Refer to: 03127302 - Cook County - Rolling Meadows/Northrop Corp. D.S.D.

June 17, 1982

Mr. James Nelson
Northrop Corp. D.S.D.
600 Hicks Road
Rolling Meadows, Illinois 60068

Northrop Corp.
1800 Century Park East
Los Angeles, California 90067

Gentlemen:

After reviewing the Interim Status Standards inspection conducted on your facility, we discovered an error in the I.E.P.A. site number issued to your facility. On your copy the number assigned is 03127307. This number should be corrected to read 03127302. Please make the necessary correction and use the new number on any future correspondence.

By copy of this letter, we are informing the U.S.E.P.A. of the error and necessary correction needed to be made.

Thank you for your cooperation.

Sincerely,

James C. Reid, Manager
Field Operations Section
Division of Land Pollution Control

JCR/BB/mks/5

cc: Bob Stone - U.S.E.P.A
Northern Region



Environmental Protection Agency

2200 Churchill Road, Springfield, Illinois 62706

217/782-6760

Refer to: 03127302 - Cook County - Rolling Meadows/Northrop Corp. D.S.D.
ILD005128988

June 2, 1982

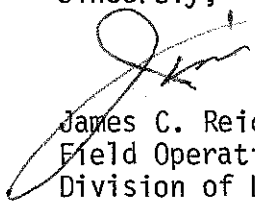
Bob Stone
U. S. Environmental Protection Agency
Region V
230 South Dearborn
Chicago, Illinois 60604

Dear Bob:

The copy of the above referenced site has an error in the site number on the I. S. S. Inspection. Your copy of the inspection has the site number 03127307 and this should be 03127302. Please make the necessary corrections to your copy.

Your cooperation is appreciated. Should you have any questions regarding this change, please contact Barb Ballard at the above telephone number.

Sincerely,


James C. Reid, Manager
Field Operations Section
Division of Land Pollution Control

JCR/BB/tk/14-2

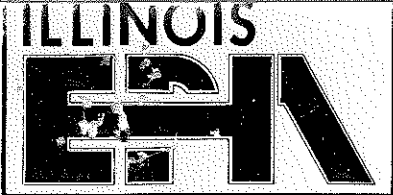
cc: Northern Region
Division File

RECEIVED

JUN 04 1982

OFFICE OF GRANT SUPPORT
AIR AND HAZARDOUS MATERIALS DIVISION
EPA, REGION V

RRB 6-7-82



Environmental Protection Agency

1761 S. First Street Maywood, IL. 60153 767

312/345-9780

Refer to: 0312730² - Cook County - Rolling Meadows/Northrop Corp D.S.D.
ILD005128988

May 7, 1982

Mr. James Nelson
Northrop Corp. DSD
600 Hicks Road

Northrop Corporation
1800 Century Park East
Los Angeles, Ca. 90067

Dear Mr. Nelson:

On March 23, 1982, representatives of the Illinois Environmental Protection Agency (IEPA) conducted an inspection of Northrop Corp. Defense Systems Division, Rolling Meadows, Ill. This inspection was conducted by the Illinois Environmental Protection Agency under a Cooperative Arrangement with, and authorization of, the United States Environmental Protection Agency (USEPA). The purpose of the inspection was to determine your facility's compliance status with the Resource Conservation and Recovery Act (RCRA) of 1976, P.L. 94-580, as amended. During the inspection the following deficiencies were observed:

Pursuant to 40 CFR 265.15(b) the owner/operator is to establish and maintain inspection records and schedules which detail records of malfunctions, operator errors, discharges, safety and emergency equipment, security devices, and operating and structural devices. Your facility is deficient in that no inspection logs or schedules were available for review.

Pursuant to 40 CFR 265.16, the owner/operator is required to establish and maintain records relating to the training of personnel involved in hazardous waste management, including a description of the job title for each position at the site, a written job description, a description of training and records detailing the training given to each such individual. The owner/operator is deficient in that no job titles or job descriptions are maintained as required.

Pursuant to 40 CFR 265.73 the owner/operator must keep a written operating record at the facility. The operating record must include the following:

- 1) A description and the quantity of each hazardous waste received and the method(s) and date(s) of its treatment, storage or disposal at the facility as required by Appendix I.
- 2) The location and quantity of each hazardous waste within the facility including cross-references to specific manifest document numbers.

Page 3

Requirements contained in 40 CFR 265.53(b) were not complied with in that copies of the contingency plan were not submitted to local emergency response organizations.

You are hereby requested to submit to this office, within 15 days of receipt of this letter, a description of steps taken to correct the above deficiencies. Failure to correct these deficiencies may result in enforcement actions initiated by USEPA pursuant to 40 USC 6928. Please send your reply to the above address. Should you have any questions concerning this matter, please contact Glenn Starnard of my staff at the above number.

Sincerely,



Kenneth P. Bechely, Northern Region Manager
Field Operations Section
Division of Land Pollution Control

KPB:GJS:prb

Enclosure: Inspection Report

cc: Division File
Northern Region
U.S. E.P.A. - Region V

03127307
STATE IDENTIFICATION NUMBER
(If Applicable)

ILD005128988
EPA IDENTIFICATION NUMBER

RCRA INSPECTION REPORT - INTERIM STATUS STANDARDS
TREATMENT, STORAGE, AND DISPOSAL FACILITIES
Form A - General Facility Standards

I. General Information:

(A) Facility Name: Northrop Corp Defense Systems Divisions
(B) Street: 600 Hicks Rd
(C) City: Rolling Meadows (D) State: IL (E) Zip Code: 60008
(F) Phone: (312) 259-9600 (G) County: _____
(H) Operator: SAME
(I) Street: _____
(J) City: _____ (K) State: _____ (L) Zip Code: _____
(M) Phone: _____ (N) County: _____
(O) Owner: NORTHROP Corporation
(P) Street: 1800 Century Park East
(Q) City: Los Angeles (R) State: Ca (S) Zip Code: 90067
(T) Phone: (213) 553-6262 (U) County: _____
(V) Date of Inspection: 3-23-82 (W) Time of Inspection (From) 10:00A (To) 11:45A
(X) Weather Conditions: 45° sunny

Rev. 3-6-81/J.B.

(Y) Person(s) Interviewed	Title	Telephone
<u>AMES NELSON</u>	<u>Maint Supr.</u>	<u>(312) 259-9600</u>
	<u>(Proj. Co-od.)</u>	
(Z) Inspection Participants	Agency/Title	Telephone
<u>Glenn Steward</u>	<u>IEPA/EPs</u>	<u>(312) 245-9780</u>
<u>Lynn Crivello</u>	<u>IEPA/EPs</u>	<u>"</u>
(AA) Preparer Information		
Name	Agency/Title	Telephone
<u>Glenn Steward</u>	<u>IEPA/EPs</u>	<u>345-9780</u>

II. SITE ACTIVITY:

Complete sections I through VII for all treatment, storage, and/or disposal facilities. Complete the forms (in parenthesis) in section VIII corresponding to the site activities identified below:

- | | |
|---|--|
| <input checked="" type="checkbox"/> A. Storage and/or Treatment | <input type="checkbox"/> D. Incineration and/or Thermal Treatment (O and P) |
| 1. Containers (I) | |
| 2. Tanks (J) | |
| 3. Surface Impoundments (K) | <input type="checkbox"/> E. Chemical, Physical, and Biological Treatment (Q) |
| 4. Waste Piles (L) | |
| <input type="checkbox"/> B. Land Treatment (M) | |
| <input type="checkbox"/> C. Landfills (N) | |

Note: If facility is also a generator or transporter of hazardous waste complete sections IX and X of this form as appropriate.

III. GENERAL FACILITY STANDARDS:
(Part 265 Subpart B)

	Yes	No	NI*	Remark
(A) Has the Regional Administrator been notified regarding:				
1. Receipt of hazardous waste from a foreign source?	<u>NA</u>	—	—	_____
2. Facility expansion?	<u>NA</u>	—	—	_____
(B) General Waste Analysis:				
1. Has the owner or operator obtained a detailed chemical and physical analysis of the waste?	<u>✓</u>	—	—	_____
2. Does the owner or operator have a detailed waste analysis plan on file at the facility?	<u>✓</u>	—	—	_____
3. Does the waste analysis plan specify procedures for inspection and analysis of each movement of hazardous waste from off-site?	<u>/</u>	—	—	_____
(C) Security - Do security measures include: (if applicable)				
1. 24-Hour surveillance?	<u>✓</u>	—	—	_____
2. Artificial or natural barrier around facility?	<u>✓</u>	—	—	_____
3. Controlled entry?	<u>✓</u>	—	—	_____
4. Danger sign(s) at entrance?	<u>✓</u>	—	—	_____
(D) Do Owner or Operator Inspections Include:				
1. Records of malfunctions?	<u>✓</u>	—	—	<u>None to date</u>
2. Records of operator error?	<u>✓</u>	—	—	<u>" "</u>
3. Records of discharges?	<u>✓</u>	—	—	<u>" "</u>

*Not Inspected

1. GENERAL FACILITY STANDARDS Continued

	Yes	No	NI*	Remarks
4. Inspection schedule?	---	✓	---	-----
5. Safety, emergency equipment?	✓	---	---	gov't Agency Audits 1 or 2x
6. Security devices?	✓	---	---	year for safety
7. Operating and structural devices?	✓	---	---	-----
8. Inspection log?	---	✓	---	-----
(E) Do personnel training records include: (Effective 5/19/81)				
1. Job titles?	---	✓	---	-----
2. Job descriptions?	---	✓	---	-----
3. Description of training?	✓	---	---	-----
4. Records of training?	✓	---	---	-----
5. Have facility personnel received required training by 5-19-81?	✓	---	---	-----
6. Do new personnel receive required training within six months?	✓	---	---	-----
(F) If required are the following special requirements for ignitable, reactive, or incompatible wastes addressed?				
1. Special handling?	✓	---	---	-----
2. No smoking signs?	✓	---	---	-----
3. Separation and protection from ignition sources?	✓	---	---	-----

*Not Inspected

IV. PREPAREDNESS AND PREVENTION:
(Part 265 Subpart C)

(A) Maintenance and Operation of Facility:

Is there any evidence of fire, explosion, or release of hazardous waste or hazardous waste constituent?

Yes No NI* Remarks

_____ ✓ _____

(B) If required, does the facility have the following equipment:

1. Internal communications or alarm systems?

✓ _____

Northrop maintains own security system

2. Telephone or 2-way radios at the scene of operations?

✓ _____

3. Portable fire extinguishers, fire control, spill control equipment and decontamination equipment?

✓ _____

Indicate the volume of water and/or foam available for fire control:

(C) Testing and Maintenance of Emergency Equipment:

1. Has the owner or operator established testing and maintenance procedures for emergency equipment?

✓ _____

2. Is emergency equipment maintained in operable conditions?

✓ _____

(D) Has owner or operator provided immediate access to internal alarms? (if needed)

✓ _____

*Not Inspected

(E) Is there adequate aisle space for unobstructed movement?

✓

V. CONTINGENCY PLAN AND EMERGENCY PROCEDURES:
(Part 265 Subpart D)

(A) Does the Contingency Plan contain the following information:

Yes No NI* Remarks

1. The actions facility personnel must take to comply with §265.51 and 265.56 in response to fires, explosions, or any unplanned release of hazardous waste? (If the owner has a Spill Prevention, Control, and Countermeasures (SPCC) Plan, he needs only to amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this Part (as applicable.)
2. Arrangements agreed by local police departments, fire departments hospitals, contractors, and State and local emergency response teams to coordinate emergency services pursuant to §265.37?
3. Names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinators?
4. A list of all emergency equipment at the facility which includes the location and physical description of each item on the list and a brief outline of its capabilities?
5. An evacuation plan for facility personnel where there is a possibility that evacuation could be necessary? (This plan must describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes?)

✓

✓

✓

✓

✓

No Arrangement in waiting

No E-coordinator listed

posted in facility, but must be included w/plan

*Not Inspected

V. CONTINGENCY PLAN AND EMERGENCY PROCEDURES - Continued

	Yes	No	NI*	Remarks
(B) Are copies of the Contingency Plan available at site and local emergency organizations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(C) Emergency Coordinator				
1. Is the facility Emergency Coordinator identified?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2. Is coordinator familiar with all aspects of site operation and emergency procedures?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Persons to be appointed</u> <u>Are familiar w/site</u> <u>and will have authority.</u>
3. Does the Emergency Coordinator have the authority to carry out the Contingency Plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(D) Emergency Procedures				
If an emergency situation has occurred at this facility, has the Emergency Coordinator followed the emergency procedures listed in 265.56?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Not needed to date.</u>

VI. MANIFEST SYSTEM, RECORDKEEPING, AND REPORTING (Part 265 Subpart E)

	Yes	No	NI*	Remarks
(A) Use of Manifest System				
1. Does the facility follow the procedures listed in §265.71 for processing each manifest?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Are records of past shipments retained for 3 years?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(B) Does the owner or operator meet requirements regarding manifest discrepancies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Not Inspected

VI. RECORDKEEPING - Continued

(C) Operating Record

1. Does the owner or operator maintain an operating record as required in 265.73?

— / —

2. Does the operating record contain the following information:

**b. The method(s) and date(s) of each waste's treatment, storage, or disposal as required in Appendix I?

— / —

c. The location and quantity of each hazardous waste within the facility?

— / —

***d. A map or diagram of each cell or disposal area showing the location and quantity of each hazardous waste? (This information should be cross-referenced to specific manifest number, if waste was accompanied by a manifest.)

— NA —

e. Records and results of all waste analyses, trial tests, monitoring data, and operator inspections?

— / —

f. Reports detailing all incidents that required implementation of the Contingency Plan?

— / —

g. All closure and post closure costs as applicable? (Effective 5-19-81)

— / —

** See page 33252 of the May 19, 1980, Federal Register.

*** Only applies to disposal facilities

VII. CLOSURE AND POST CLOSURE
(Part 265 Subpart G)

	Yes	No	NI*	Remarks
(A) Closure and Post Closure				
1. Is the facility closure plan available for inspection by May 19, 1981?	<input checked="" type="checkbox"/>			
2. Has this plan been submitted to the Regional Administrator	<input checked="" type="checkbox"/>			<u>closure has not been planned.</u>
3. Has closure begun?	<input checked="" type="checkbox"/>			
4. Is closure estimate available by May 19, 1981?	<input checked="" type="checkbox"/>			
(B) Post closure care and use of property				
Has the owner or operator supplied a post closure monitoring plan? (effective by May 19, 1981)			<u>N/A</u>	

VIII. FACILITY STANDARDS
(Part 265, Subparts I thru R)

**I
USE AND MANAGEMENT OF CONTAINERS**

Facility Name: Northrop DSD Date of Inspection: 3-23-82

	Yes	No	NI*	Remarks
1. Are containers in good condition?	<input checked="" type="checkbox"/>			
2. Are containers compatible with waste in them?	<input checked="" type="checkbox"/>			
3. Are containers stored closed?	<input checked="" type="checkbox"/>			
4. Are containers managed to prevent leaks?	<input checked="" type="checkbox"/>			
5. Are containers inspected weekly for leaks and defects?	<input checked="" type="checkbox"/>			
6. Are ignitable & reactive wastes stored at least 15 meters (50 feet) from the facility property line? (Indicate if waste is ignitable or reactive.)	<input checked="" type="checkbox"/>			

	Yes	No	NI*	Remarks
7. Are incompatible wastes stored in separate containers? (If not, the provisions of 40 CFR 265.17(b) apply.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
8. Are containers of incompatible waste separated or protected from each other by physical barriers or sufficient distance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

J
TANKS

Facility Name: NA Date of Inspection: _____

1. Are tanks used to store only those wastes which will not cause corrosion, leakage or premature failure of the tank?	_____	_____	_____	_____
2. Do uncovered tanks have at least 60 cm (2 feet) of freeboard, or dikes or other containment structures?	_____	_____	_____	_____
3. Do continuous feed systems have a waste-feed cutoff?	_____	_____	_____	_____
4. Are waste analyses done before the tanks are used to store a substantially different waste than before?	_____	_____	_____	_____
5. Are required daily and weekly inspections done?	_____	_____	_____	_____
6. Are reactive & ignitable wastes in tanks protected or rendered non-reactive or non-ignitable? Indicate if waste is ignitable or reactive. (If waste is rendered non-reactive or non-ignitable, see treatment requirements.)	_____	_____	_____	_____
7. Are incompatible wastes stored in separate tanks? (If not, the provisions of 40 CFR 265.17(b) apply.)	_____	_____	_____	_____

	Yes	No	NI*	Remarks
3. Has the owner or operator addressed the waste analysis requirements of 265.402?	_____	_____	_____	_____
4. Are inspection procedures followed according to 265.403?	_____	_____	_____	_____
5. Are the special requirements fulfilled for ignitable or reactive wastes?	_____	_____	_____	_____
6. Are incompatible wastes treated? (If yes, 265.17(b) applies.)	_____	_____	_____	_____

Note: EPA has temporarily suspended the applicability of the requirements of the hazardous waste regulations in 40 CFR Parts 122, 264 and 265 to owners and operators of (1) wastewater treatment tanks that receive, store, and treat wastewaters that are hazardous waste or that generate, store or treat a wastewater treatment sludge which is a hazardous waste where such wastewaters are subject to regulation under Sections 402 or 307(b) of the Clean Water Act (33 U.S.C. 1251 et seq.) and (2) neutralization tanks, transport vehicles, vessels, or containers which neutralize wastes which are hazardous only because they exhibit the corrosivity characteristic under 40 CFR §261.2 or are listed as hazardous wastes in Subpart D of 40 CFR Part 261 only for this reason

IX

Complete this section if the owner or operator of a TSD facility also generates hazardous waste that is subsequently shipped off-site for treatment, storage, or disposal.

1. MANIFEST REQUIREMENTS

	Yes	No	NI*	Remarks
(A) Does the operator have copies of the manifest available for review?	<input checked="" type="checkbox"/>	_____	_____	_____
(B) Do the manifest forms reviewed contain the following information: (If possible, make copies of, or record information from, manifest(s) that do not contain the critical elements)				
1. Manifest document number?	<input checked="" type="checkbox"/>	_____	_____	_____
2. Name, mailing address, telephone number, and EPA ID Number of Generator	<input checked="" type="checkbox"/>	_____	_____	_____

	Yes	No	NI*	Remarks
3. Name and EPA ID Number of Transporter(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Name, address, and EPA ID Number of Designated permitted facility and alternate facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. The description of the waste(s) (DOT shipping name, DOT hazard class, DOT identification number)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. The total quantity of waste(s) and the type and number of containers loaded?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Required certification?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Required signatures?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(C) Does the owner or operator submit exception reports when needed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2. PRE-TRANSPORT REQUIREMENTS

(A) Is waste packaged in accordance with DOT Regulations? (Required prior to movement of hazardous waste off-site)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(B) Are waste packages marked and labeled in accordance with DOT regulations concerning hazardous waste materials? (Required to movement of hazardous waste off-site)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(C) If required, are placards available to transporters of hazardous waste?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

REMARKS

Use this section to briefly describe site activities observed at the time of the inspection. Note any possible violations of Interim Status Standards.

Site Activity: Northrop's Rolling Meadows facility produces electronic counter-measures - Defense systems ie RADAR Detection systems. There are Research / Development facilities in addition to the production activities. The majority of production activity appears to be electronic component assembly.

Remarks: Northrop produces several waste streams of which the majority originate from degreasing / cleaning operation.

Among the solvents are (classified F001, F003) methylene chloride, Freon TMS isopropyl & methyl alcohol, acetone.

The facility also disposes waste Humiseal, a material which is sprayed on components to minimize the effects of high humidity on these components. The waste is combined with a thinner - usually resulting from cleanup operation. Humiseal is applied by spray application similar to paint spray application.

The facility has applied for the status of generator / storage of hazardous waste - As such the following deficiencies were noted:

- ① No facility inspection schedule or log is maintained
- ② No job titles or job descriptions, as required, are maintained
- ③ No facility operating record.
- ④ No closure plan or closure cost estimate were available for review.
- ⑤ Incomplete contingency plan:
 - ③ no arrangement w/ local emergency res. teams
 - ⑥ no itemization of emergency equipment.
 - ⑦ emergency coordinators not identified
 - ⑧ plan was not on file w/ local emergency response teams.

140000 Sqm

(11) ————— (18)

Region # 12

Letter Sent (Yes or No)
(26)

Weather 

Inspector 6 7 5
(27) (28) (29)

Site Open: Yes(☒) No(☐)

TYPE OF OPERATION:

AUTHORIZATION:

Landfill	()
Random Dump	()
Other <i>sanitary</i>	()
Quantity Received Daily(1-6)	

Storage ()	E.P.A. Permit ()
Salvage ()	Variance ()
A.C.D. ()	21(e) ()
	Board Order ()
<hr/> (30)	Illegal (5) ()

Illegal (5) () (31)

(31)

LPC 4 1/79 5,000

I S or D 5
(62)

Northridge rather than a facility in a suspected
major facility under RCRA. Site which is the highest
concentration of several electronic warfare measures
and the system is. RADAR Detection Systems. The majority
of production work done on site is that of electronic equipment
assembly. Site answer to the facility is extremely difficult
due to the complexity of the electronic products.

INTERVIEW: The wastes generated by this facility includes solvent and a degreasing operation paint waste solvents. A material safety data sheet is always on each solvent drum in order to ensure safety to workers. This material is disposed of along with thinners and paint. The manifest inspected appeared to be in order. For a generator/storage facility under RCRA the following information is in place and added.

DIAGRAM: ① No health impact on schedule as log was reviewed for review.

- ② No job titles or job descriptions. (Chairman of Finance)
- ③ Outlining plan structure in the company and then work out the
- ④ to bring the business plan to reality
- ⑤ to ensure the business plan is realistic
- ⑥ to ensure the business plan is realistic
- ⑦ to ensure the business plan is realistic
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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 -- (217) 782-3397
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601 -- (312) 814-6026

217/524-3300

ROD R. BLAGOJEVICH, GOVERNOR

DOUGLAS P. SCOTT, DIRECTOR

April 23, 2007

Certified Mail

7004 2510 0001 8616 6485

Northrop Gromman
Attn: Environmental Coordinator
500/600/600a Hicks Road
Rolling Meadows, Illinois 60008

Re: 0312730002 -- Cook County
Northrop Gromman
ILD005128988
RCRA Permit

Dear Environmental Coordinator:

The Illinois EPA and the United States Environmental Protection Agency (U.S. EPA) have compiled a list of all facilities deemed appropriate and important to address using the Resource Conservation and Recovery Act's (RCRA) Corrective Action Program. Because this set of 3,880 facilities has national remediation goals which will culminate in the year 2020, it is referred to as the 2020 Corrective Action Universe. Your facility is part of this 2020 Universe.

As a result, a final remedy needs to be in place (i.e., remedy construction completed) at your facility by 2020 (although actual attainment of cleanup goals through remedy implementation may take a while longer). If we have not already done so, we will be working with you to develop a plan and a schedule that achieves this goal before 2020.

Your facility has been included in the 2020 Universe because one or more of the following is true:

- It has a RCRA permit obligation,
- Illinois EPA and U.S. EPA agreed that it needs to be addressed under the RCRA Corrective Action Program, as it at one time operated a hazardous waste management unit subject to the interim status or permit requirements of RCRA.

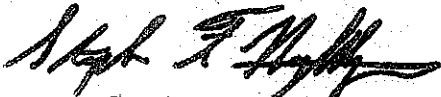
Inclusion on this list does not imply failure on your part to meet any legal obligation, nor should it be construed as an adverse action against you. It only means that Illinois EPA and U.S. EPA have identified your facility -- and every other facility in the 2020 Universe -- as needing to complete RCRA Corrective Action if they have not done so already. Our national program goal is to address these cleanup obligations before the end of 2020. Accordingly, progress will be tracked for each facility in the 2020 Universe. The list of facilities will be posted on our web site at <http://www.epa.gov/correctiveaction> in the near future.

Page 2

Illinois EPA will work to address remediation concerns at your facility in a manner consistent with your plans for the property. There are a variety of options available for completing the required remediation efforts at your facility, ranging from participation in Illinois EPA's Site Remediation Program to establishment of an Administrative Order on Consent with USEPA under Section 3008(h) of RCRA.

Illinois EPA would like to schedule a meeting with you in the near future to discuss remedial activities at your facility and achievement of the goal mentioned in the second paragraph of this letter. Please contact James K. Moore, P.E. of my staff at 217/524-3295 if you have any questions regarding this letter and to schedule a meeting to discuss the contents of this letter.

Sincerely,



Stephen F. Nightingale, P.E.
Manager, Permit Section
Bureau of Land

SFN:JKM:bjh\072572s.dot

cc: Hak Cho, USEPA, Region 5



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

DE-9J

April 17, 2007

Mr. David Gurrie
Manager,
Environmental and Safety Compliance
Northrop Grumman Systems Corp.
600 Hicks Road
M.S. H-6282
Rolling Meadows, IL 60008

**RE: Northrop Grumman Systems Corp.
EPA ID# ILD005128988
RCRA 2020 Corrective Action Universe**

Dear Mr. Gurrie:

Thank you for taking the opportunity to discuss the Northrop Grumman Systems Corp. facility with us. As we discussed in our call, please find the enclosed copy of the April 15, 1994 Preliminary Assessment/Visual Site Inspection (PA/VSİ) report from the investigation conducted on behalf of the United States Environmental Protection Agency (US EPA) by PRC Environmental Management, Inc. Please note that certain pages from this report stamped as "enforcement confidential" have now been released for distribution to Northrop Grumman, and are stamped as such.

The PA/VSİ report indicated the presence of 8 solid waste management units (SWMUs) and one area of concern (AOC) at your facility. Although none of the SWMUs or AOCs indicated evidence of a release, certain recommendations for further action were noted for US EPA's attention. They are:

SWMU 3 (Room 6419)-Operated from 1988 until the time of the PA/VSİ:
PA/VSİ recommended application of new floor covering obtaining an air permit if necessary.

SWMU 5 (Room 5097)-Operated from 1980 until the PA/VSİ, RCRA closed in 1987:
PA/VSİ recommended inspection, sampling underneath, and repair of floor cracks, and to reapply epoxy floor covering, and obtain air permit if necessary.

AOC (Former UST Location) - Operated from 1971 to 1977:
PA/VSİ recommended collection of subsurface soil samples.

We would appreciate receiving any new information that you have developed since the PAVSI report was prepared. We are especially interested in any sample analytical results that you may have. US EPA will work with you to address any remediation concerns at your facility for which the evidence discussed above does not exist, or for which further evidence is required.

If you have any questions on this correspondence or this call, please don't hesitate to contact me at (312) 353-2720, or by e-mail at freeman.brian@epa.gov.

Sincerely,

A handwritten signature in cursive script, appearing to read "Brian P. Freeman".

Brian P. Freeman
Senior Chemist
Corrective Action Project Manager

cc: Northrop Grumman Systems Corrective Action File



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

DE-9J

April 17, 2007

Mr. David Gurrie
Manager,
Environmental and Safety Compliance
Northrop Grumman Systems Corp.
600 Hicks Road
M.S. H-6282
Rolling Meadows, IL 60008

RE: Northrop Grumman Systems Corp.
EPA ID# ILD005128988
RCRA 2020 Corrective Action Universe

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The PA/VS report indicated the presence of 8 solid waste management units (SWMUs) and one area of concern (AOC) at your facility. Although none of the SWMUs or AOCs indicated evidence of a release, certain recommendations for further action were noted for US EPA's attention. They are:

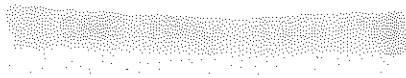
SWMU 3 (Room 6419)-Operated from 1988 until the time of the PA/VS:
PA/VS recommended application of new floor covering obtaining an air permit if necessary. - Covered several times, covered with one "bubble permit"

SWMU 5 (Room 5097)-Operated from 1980 until the PA/VS, RCRA closed in 1987:
PA/VS recommended inspection, sampling underneath, and repair of floor cracks, and to reapply epoxy floor covering, and obtain air permit if necessary. - Covered with 1 piece over, epoxy, chemical resistant vinyl floor.

AOC (Former UST Location) - Operated from 1971 to 1977:
PA/VS recommended collection of subsurface soil samples.

Actually 1967 - Original Bldg Having 500 gal
Silicone Coolant - "Coolant"

Sending Pk of New Floors in 6419 and 5097, and will do core sampling of Tank room for VOCs, SVOCs.



We would appreciate receiving any new information that you have developed since the PA/VS1 report was prepared. We are especially interested in any sample analytical results that you may have. US EPA will work with you to address any remediation concerns at your facility for which the evidence discussed above does not exist, or for which further evidence is required.

If you have any questions on this correspondence or this call, please don't hesitate to contact me at (312) 353-2720, or by e-mail at freeman.brian@epa.gov.

Sincerely,



Brian P. Freeman
Senior Chemist
Corrective Action Project Manager

cc: Northrop Grumman Systems Corrective Action File



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

APR 03 2007

REPLY TO THE ATTENTION OF DE-9J

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

William Cameron
Northrop Gumman Systems Corp
600 Hicks Road Room H6282
Rolling Meadows, Illinois 60008

RE: Northrop Gumman Systems Corp
500/600/600A Hicks Road, Rolling Meadows, Illinois – EPA ID # ILD005128988

Dear Mr. Cameron:

The Illinois Environmental Protection Agency (IEPA) and the United States Environmental Protection Agency (U.S. EPA) have compiled a list of all facilities deemed appropriate and important to address using the Resource Conservation and Recovery Act's (RCRA) Corrective Action Program. Because this set of 3,880 facilities has national remediation goals which will culminate in the year 2020, it is referred to as the 2020 Corrective Action Universe. **Your facility is part of this 2020 Universe.**

As a result, the IEPA and U.S. EPA expect that a final remedy will be in place (i.e. remedy construction completed) at your facility by 2020 (although actual attainment of cleanup goals through remedy implementation may take a while longer). If we have not already done so, we will be working with you to develop a plan and a schedule that achieves this goal before 2020.

Your facility has been included in the 2020 Universe because *one or more of the following is true:*

- It already belongs to the 2008 Corrective Action Baseline,
- It has a RCRA permit obligation,
- IEPA and U.S. EPA agreed that it needs to be addressed under the RCRA Corrective Action Program.

Inclusion on this list does not imply failure on your part to meet any legal obligation, nor should it be construed as an adverse action against you. It only means that IEPA and U.S. EPA have identified your facility—and every other facility in the 2020 Universe—as needing to complete RCRA Corrective Action if they have not done so already. Our national program goal is to largely address these cleanup obligations before the end of 2020. Accordingly, progress will be tracked for each facility in the 2020 Universe. The list of facilities will be posted on our web site at <http://www.epa.gov/correctiveaction> on April 16, 2007.

U.S. EPA Region 5 will work to address remediation concerns at your facility in a manner consistent with your plans for the property. If you believe that facility-wide corrective actions are already complete for your site, or if you have any questions regarding this letter, please contact Brian Freeman at (312) 353-2720.

Sincerely,

A handwritten signature in dark ink, appearing to read "Jose G. Cisneros". The signature is fluid and cursive, with the first name "Jose" and last name "Cisneros" clearly distinguishable.

Jose G. Cisneros, Chief
Waste Management Branch

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

DATE: JAN 26 1996

SUBJECT: Revised FOIA Procedures for Preliminary Assessment/
Visual Site Inspection (PA/VSI) Reports

FROM: Joseph Boyle, Chief *ECAB* Enforcement and Compliance Assurance Branch
Willie Harris, Chief *WPH* Program Management Branch

TO: All ECAB and PMB Staff

This memorandum outlines the revised procedures to be used when a releasability determination under FOIA needs to be made for a PA/VSI. All facilities with PA/VSI reports completed have been ranked as high (H), medium (M), or low (L) priority facilities for corrective action. The old procedure required that any PA/VSI report requested under FOIA be submitted to the Enforcement and Compliance Assurance Branch for a determination of releasability. In an effort to streamline this process and better serve our customers the responsibility of evaluating releasability of these documents will reside with PMB. The following process shall be utilized:

- For those facilities designated as high, medium, or low priority facilities, the PMB staff person shall send a WFO or voicemail message to the appropriate Enforcement Section Chief (currently Lorna Jereza for IL/IN, George Hamper for MN/OH, and Paul Little for MI/WI) to inquire as to the releasability of information concerning the facility. If there are no pending actions, the complete PA/VSI report can be sent out with the standard disclaimer that the conclusions and recommendations are those of a U.S. EPA contractor and may not reflect those of U.S. EPA. If there is a pending enforcement situation, then the procedure outlined in the bullet below shall be followed. Note that information concerning any pending enforcement action should not be released or discussed with the requestor.
- For those facilities designated as high priority facilities where an enforcement action is imminent, the "Executive Summary" and "Recommendations and Conclusions" sections of the PA/VSI should be withheld as enforcement confidential. The enforcement individual responsible for the site must prepare a Statement of Harm memorandum for withholding those portions of the PA/VSI report. For more information on preparing this memorandum, please refer to the memorandum dated June 29, 1995, "FOIA Discretionary Release Policy Statements of Harm for PA/VSI Reports" from Thomas Williams, ORC to Laura Lodisio (Confidential-Privileged Attorney Client Communication).

*Depends on 67C or 4
some derive the statement of Harm is required*

RECEIVED
SEP 19 1994

OFFICE OF RCRA
Waste Management Division
NORTHROP GRUMMAN U.S. EPA, REGION VI

Electronics Systems Division
Northrop Grumman Corporation
600 Hicks Road
Rolling Meadows, IL 60008-1098
Telephone 708-259-9600

September 14, 1994

Kevin M. Pierard, Chief
Minnesota/Ohio Technical
Enforcement Section
RCRA Enforcement Branch
USEPA Region 5
77 W. Jackson Boulevard
Chicago, IL. 60604-3590

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OCT 04 1994

Re: Visual Site Inspection
Northrop Corporation
Electronics Systems Division
Rolling Meadows, IL.
ILD 005 128 988

Dear Mr. Pierard,

We have received the site's copy of the USEPA final Preliminary Assessment/Visual Site Inspection (PA/VSI) report issued by your office on June 29, 1994 for our site. Our review of the report has identified several points where the auditors have misinterpreted the discussions of our processes. We contacted PRC who advised us to submit our corrections in writing to your office.

We consider correcting these points to be important as they may give the reader an inaccurate perception of the facility and may prove to be problematic if left uncorrected. We assume that addressing these errors is also important to you since any report submitted to the Agency should be accurate. Therefore, Northrop is submitting the following corrections for review and incorporation by your office into the final report.

1. The wastewater treatment system, referred to as "WWTP (SWMU 1)" in the report, incorrectly describes this system as treating waste from all areas of the facility. Additionally, other errors within the report concerning the operation of the WWTP would be clarified by the following system description.

The WWTP system only treats rinsewater and spent plating baths generated within the Printed Wiring Board manufacturing area (PWB). Rinsewater, which represents > 99% of the daily treated waste water, is transported via floor drains to sumps, and is then pumped directly to the system in overhead pipes. Drum



rinstate, from PWB raw material drums, is discharged into the same floor drains and is combined with the rinsewater. Spent plating baths are pumped through a separate piping system to a holding tank which is then bled into the waste water stream for treatment.

Treatment is accomplished by filtering the waste water, removing metals using four ion exchange columns, adjusting the pH, and then discharging the waste water into the sanitary sewer system. The columns are periodically regenerated by stripping off contaminant metals with strong acid. The regenerating acid, containing concentrated metals, is reclaimed using an electrolytic cell where the metals are plated out as recyclable metal sheets. The acid is then returned to a holding tank to be used for future column regeneration.

The WWTP system also treats PWB effluent from the photoresist stripping process. Since the photoresist contains plastics which will damage the waste water treatment system, the material is batch treated separately. This is accomplished by segregating the photoresist in barrels, transporting it into the WWTP room, and then treating it in a separate section of the system. Treatment involves chemical precipitation of the dissolved plastic followed by filtration. The effluent from the filter press is introduced into the system's final pH adjust tank prior to discharge to the sanitary sewer. The filter cake is accumulated in 55 gallon drums, moved into hazardous waste storage, room H6419, for storage, then shipped off site for disposal.

PWB wastes which are not compatible with the system are spent baths containing gold cyanide, concentrated nickel and lead. These wastes are transported in 55 gallon drums to hazardous waste storage, room 6419, where they are stored for up to 90 days, then shipped off site for recycling or treatment.

2. *Two Baron-Blakeslay Freon degreasers/stills, identified as "SWMU 6" in the report, are described as Freon reclaim units. Actually, the primary operation of these units is for non-critical cleaning (degreasing) of parts.*

The Freon quality requirement for non-critical Freon cleaning operations is lower than that of most other Freon cleaning operations on site. Therefore, as part of a Freon conservation and phase out program that Northrop initiated in 1990, spent material from other degreasers is used as feed stock for these degreasers. This cascade approach eliminated the need to purchase new Freon for these two units.

At the time of the inspection, two Baron-Blakeslay degreasers were independently piped to two Baron-Blakeslay stills. Since

the inspection, one degreaser and still has been phased out of service. The systems operate by continuously flowing Freon through the stills where impurities are separated by distillation. The still bottoms are periodically removed, accumulated, then sent to Safety Kleen for recycling.

Prior to 1990 all degreasers, including these two, used new Freon. As the Freon became contaminated, it was removed, accumulated in 55 gallon drums, then sent to Safety Kleen where it was recycled. The conservation program significantly reduced the volume of spent Freon recycled off site and the purchase of new Freon.

3. *The report's section on "History of Documented Releases" should elaborate the description of our environmental setting to explain why trace metals might be found at the perimeter of our site.*

The report identifies a 1987 environmental boundary survey of our site which indicated the presence of arsenic, chromium, and lead. However, it does not provide any insight to the environmental setting that may have contributed to the findings.

Most of the environmental factors that could have contributed to the metals found were discussed at the time of the survey. These factors were the topography, prior use, and present use of the land in the immediate area. Prior to 1980 the northeast corner of Northrop's property was a low lying marshy area which collected rainwater runoff from the surrounding area. As a result, it seemed highly likely that the farming in the area up to the mid 1960's, the proximity of several major highways, the proximity of the Chicago & Northwestern Railroad line, the fill from the railroad spur along the east property line, and the fill from our parking lot could all be contributors.

Additionally, the sampling that was performed for the survey was designed simply to provide an indication of any problem. The samples were composited over a wide area and depth and there was inadequate information to differentiate between a single sample issue and area wide problem.

4. *In the report's discussions on the PWB & Electron Tubes processes there appears to be confusion on the use of cyanide. The report incorrectly identifies cyanide used for rinsing product.*

All product rinsing in both PWB and Electron Tubes is performed in deionized water rinse tanks (baths). Cyanide is used as a component of one gold plating bath in PWB and in copper, silver, and gold plating baths in Electron Tubes.

5. The report states that our retention basin does not discharge to any sewer or surface body. Actually, the retention basin does discharge to a storm sewer as described below.

The retention basin is designed to act as a buffer to the flow of water entering the Rolling Meadows storm sewer located along the east side of the property. Pumps, activated by floats, pump water up and into the storm sewer at a controlled rate. This sewer runs south, then east, and discharges into Salt Creek.

6. Under the Regulatory History section, the report incorrectly interpreted our "bubble" air permit to mean that multiple Northrop facilities are grouped together under one air permit. This permit applies only to the 500/600/600A facility; multiple facilities require independent permits.

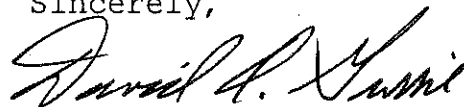
The term "bubble" was intended to mean that all air emission sources are grouped under a collection of categories as opposed to individual point sources. In this manner we can accurately account for fugitive as well as point source emissions.

I have attached a copy of the final report which has been highlighted and annotated to correspond to our comments. Minor corrections not incorporated in this response are also noted in the report. This should help expedite your review and corrections to the report.

We expect that conclusions drawn from this report should reflect our true environmental status. We at Northrop Corporation's Electronics Systems Division take pride in our environmental record and accomplishments. Over the past five years we have successfully reduced our hazardous waste generation and disposal by 92%. We are working toward totally eliminating our use of ozone depleting chemicals by mid 1995, and are instituting a pollution prevention program that will reduce the use of volatile organic, toxic, and other hazardous chemicals in the plant. We believe that, under the constraints of our DoD environment, these accomplishments are significant.

If there is any additional information you may need or questions on the above please call me at (708)259-9600 on X5099.

Sincerely,



David A. Gurrie
Mgr. Environmental &
Safety Compliance



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

HRE-8J

June 29, 1994

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JUL 07 1994

Mr. David A. Currie
Northrop Corporation
Electronic Systems Division
600 Hicks Road
Rolling Meadows, IL 60008

Re: Visual Site Inspection
Northrop Corporation
Electronic Systems Division
Rolling Meadows, Illinois
ILD 005 128 988

Dear Mr. Currie:

The U.S. Environmental Protection Agency is enclosing a copy of the final Preliminary Assessment/ Visual Site Inspection (PA/VSI) report for the referenced facility. The executive summary and conclusions and recommendations sections have been withheld as Enforcement Confidential.

If you have any questions, please call Francene Harris at (312) 886-2884.

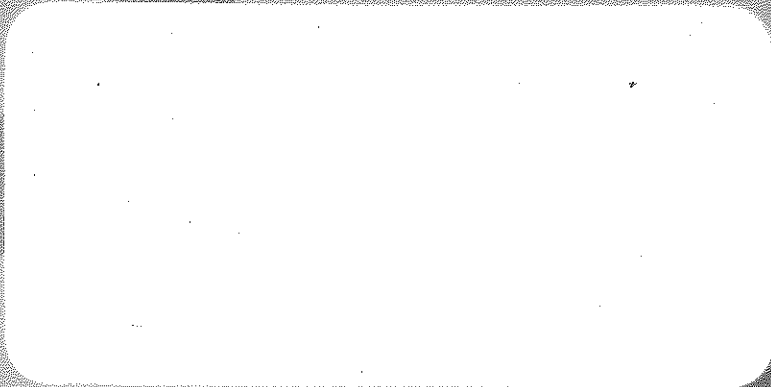
Sincerely yours,

Kevin M. Pierard, Chief
Minnesota/Ohio Technical Enforcement Section
RCRA Enforcement Branch





U.S. Environmental Protection Agency
Office of Waste Programs Enforcement
Contract No. 68-W9-0006



TES 9

**Technical Enforcement Support
at Hazardous Waste Sites
Zone III
Regions 5,6, and 7**

PRC

PRC Environmental Management, Inc.

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MAY 19 1994

PRC Environmental Management, Inc.
233 North Michigan Avenue
Suite 1621
Chicago, IL 60601
312-856-8700
Fax 312-938-0118



**PRELIMINARY ASSESSMENT/
VISUAL SITE INSPECTION**

**NORTHROP CORPORATION
ELECTRONIC SYSTEMS DIVISION
ROLLING MEADOWS, ILLINOIS
ILD 005 128 988**

FINAL REPORT

Prepared for

**U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, DC 20460**

Work Assignment No.	:	R05032
EPA Region	:	5
Site No.	:	ILD 005 128 988
Date Prepared	:	April 15, 1994
Contract No.	:	68-W9-0006
PRC No.	:	309-R05032IL76
Prepared by	:	PRC Environmental Management, Inc. (Jeff Swano)
Contractor Project Manager	:	Shin Ahn
Telephone No.	:	(312) 856-8700
EPA Work Assignment Manager	:	Kevin Pierard
Telephone No.	:	(312) 886-4448

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RELEASED 7/18/82
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EXECUTIVE SUMMARY

PRC Environmental Management, Inc. (PRC), performed a preliminary assessment and visual site inspection (PA/VSI) to identify and assess the existence and likelihood of releases from solid waste management units (SWMU) and other areas of concern (AOC) at the Northrop Corporation, Electronic Systems Division (Northrop) facility in Rolling Meadows, Cook County, Illinois. This summary highlights the results of the PA/VSI and the potential for releases of hazardous wastes or hazardous constituents from SWMUs and AOCs identified.

The Northrop facility employs about 2,700 people and is used as a research and development (R&D) and manufacturing facility to produce electronic countermeasures for the U.S. Department of Defense (DOD). Manufacturing activities include metal finishing, metal plating, and degreasing to produce printed wire board (PWB), electron tubes, and micro-integrated circuits (MIC). Wastes derived from the manufacturing processes consist of waste acids (D002, D007, D008), waste caustics (D002, D008), waste cyanides (F007, D002, D011), waste filters (D011), spent solvents (F001, F002, F005, D001, D006, D007, D018, D035, D039), and miscellaneous wastes such as solvent-contaminated waste oil (F001), solvent-contaminated rags (F005, D001, D035), spent photodeveloper (D008), laboratory packs of expired chemicals (which the facility designates as LABP). Rinsing raw material drums generates empty drums and rinsate. The facility's wastewater treatment plant (WWTP) (SWMU 1), generates nonhazardous filter bags, photoresist solids, copper sheeting, and treated wastewater.

Waste acids, waste caustics, and waste cyanides are collected in Satellite Accumulation Areas (SWMU 8) and stored in segregated areas of Room 6419 (SWMU 3) prior to off-site disposal. Waste filters are placed in 55-gallon drums near the plating baths and transferred to Room 5097 (SWMU 5) when full prior to off-site disposal. Spent solvents were identified in the facility's original Part A permit application. All spent solvents, except for some freon, are collected in Satellite Accumulation Areas (SWMU 8) and stored in Room 5097 (SWMU 5) prior to off-site disposal. Spent freon is treated on site in stills (SWMU 6). The still bottoms are drummed and stored in Room 5097 (SWMU 5). Solvent-contaminated waste oil, solvent-contaminated rags, and spent photodeveloper are collected in Satellite Accumulation Areas (SWMU 8) and stored in Room 5097 (SWMU 5) prior to off-site disposal. Expired chemicals, such as polyurethane coatings, lubricants, and detergents are

placed into lab packs and stored in Room 5097 (SWMU 5) prior to off-site disposal. Empty raw material drums are rinsed out, the rinsate is treated in the WWTP (SWMU 1), and the drums are stacked in the Empty Drum Storage Area (SWMU 7). Filter bags are accumulated in Room 6409 (SWMU 1) and disposed of off-site. Photoresist solids are drummed in Room 6409 (SWMU 1) and disposed of off-site in a municipal landfill. Copper sheeting is recovered in the WWTP in Room 6409 (SWMU 1) and recycled off site. Treated wastewater is discharged to the Municipal Water Reclamation District (MWRD) sewer system.

The facility began operations as a ham radio manufacturer in 1967; prior to that the property was farmland. In 1980, the facility submitted a Part A permit application indicating that it was a generator of spent solvents (F001, F003, D001, D007), and waste commercial chemicals (P030, P104, U151, U154). In 1983, the facility began producing PWB and, hence, generating waste acids, waste caustics, and waste cyanides. The facility's three buildings currently occupy 940,000 square feet of a 52-acre parcel of land in a light manufacturing area. The facility's current status is that of a large quantity generator of hazardous waste.

The PA/VSI identified the following eight SWMUs and one AOC at the facility:

Solid Waste Management Units

1. Wastewater Treatment Plant
2. Room 6407
3. Room 6419
4. Room 5087
5. Room 5097
6. Freon Stills
7. Empty Drum Storage Area
8. Satellite Accumulation Areas

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Area of Concern

1. Former Underground Storage Tank Location

No releases from the facility to the environment have been documented. In July 1988, IEPA conducted an air pollution control inspection at the facility and found the facility did not have an air permit for a laser trimmer of MIC ceramics containing beryllium oxide. The facility was fined

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\$10,000 for the violation, but the state did not consider this an air release. No emergency or corrective actions have occurred at the facility.

In 1987, Northrop installed monitoring wells around the perimeter of the facility property to monitor groundwater quality due to concerns regarding industrial activities at neighboring properties. At this time, Northrop collected soil and groundwater samples. Soil sampling results revealed arsenic at 1.92 milligrams per kilogram (mg/kg) on the south boundary; arsenic at 1.83 mg/kg and chromium at 22.8 mg/kg on the east boundary; arsenic at 1.68 mg/kg, chromium at 46.5 mg/kg, and lead at 69.7 mg/kg on the north boundary. Groundwater sampling identified bromoform at 3.6 micrograms per liter from the north boundary. Groundwater is encountered at about 7 to 15 feet below ground surface at the facility. Groundwater flow beneath the facility appears to be to the northeast.

The primary source of drinking water in the vicinity of the facility is Lake Michigan, the intakes of which are located about 30 miles southeast of the facility. Groundwater is used as a municipal and private water supply. The City of Rolling Meadows has one municipal well located 0.25 mile south and downgradient of the facility and draws water from a sandstone aquifer. The Village of Palatine has six municipal wells. These wells are estimated to draw water from a limestone aquifer. Three of these wells are located within a 3-mile radius of the facility in Rolling Meadows: 0.25 mile north, 2 miles northwest, and 2.5 miles southwest of the facility. Groundwater from these wells is used only in emergencies and has not been used in over 10 years. Private drinking water wells within a 3-mile radius of the facility are located about 1 mile south and 1.5 miles southwest of the facility. The nearest residence is located about 0.25 mile north of the facility. The facility's east boundary is fenced. Security guards control the building entrances of the entire facility 24 hours per day because of Northrop's DOD-related activities.

No sensitive environments exist at the facility. The nearest sensitive environment is a 25-acre wetland located about 1.5 miles northwest of the facility. Endangered species listed for Cook County include Peregrine falcon (breeding habitat) and Prairie bush-clover. Prior to 1979, a marshy area was located in the northeast portion of the facility where the parking lot is currently located. According to facility personnel, this marshy area was filled in when the retention pond and parking lots were built in 1979-1980.

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DATE 7/18/80
RIN #
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ES-3

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PRC recommends applying new epoxy floor covering for the floor in Room 6419 (SWMU 3). PRC recommends inspecting, sampling, and repairing the floor cracks present in Room 5097 (SWMU 5), and to reapply epoxy floor covering. For both Room 6419 (SWMU 3) and Room 5097 (SWMU 5), PRC recommends verifying that the facility's air permits include emissions from the exhaust vents located in those rooms. PRC recommends subsurface soil sampling the Former Underground Storage Tank Location (AOC 1) to determine if a release from the silicone-oil coolant tank occurred.

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1.0 INTRODUCTION

PRC Environmental Management, Inc. (PRC), received Work Assignment No. R05032 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W9-0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5.

As part of the EPA Region 5 Environmental Priorities Initiative, the RCRA and CERCLA programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities. The PA/VSI is the first step in the process of prioritizing facilities for corrective action. Through the PA/VSI process, enough information is obtained to characterize a facility's actual or potential releases to the environment from solid waste management units (SWMU) and areas of concern (AOC).

A SWMU is defined as any discernible unit at a RCRA facility in which solid wastes have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste.

The SWMU definition includes the following:

- RCRA-regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that EPA has usually exempted from standards applicable to hazardous waste management units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents. Such areas might include a wood preservative drippage area, a loading or unloading area, or an area where solvent used to wash large parts has continually dripped onto soils.

An AOC is defined as any area where a release of hazardous waste or constituents to the environment has occurred or is suspected to have occurred on a nonroutine and nonsystematic basis. This includes any area where a strong possibility exists that such a release might occur in the future.

The purpose of the PA is as follows:

- Identify SWMUs and AOCs at the facility
- Obtain information on the operational history of the facility
- Obtain information on releases from any units at the facility
- Identify data gaps and other informational needs to be filled during the VSI

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago.

The purpose of the VSI is as follows:

- Identify SWMUs and AOCs not discovered during the PA
- Identify releases not discovered during the PA
- Provide a specific description of the environmental setting
- Provide information on release pathways and the potential for releases to each medium
- Confirm information obtained during the PA regarding operations, SWMUs, AOCs, and releases

The VSI includes interviewing appropriate facility staff; inspecting the entire facility to identify all SWMUs and AOCs; photographing all visible SWMUs; identifying evidence of releases; making a preliminary selection of potential sampling parameters and locations, if needed; and obtaining additional information necessary to complete the PA/VSI report.

This report documents the results of a PA/VSI of the Northrop Corporation, Electronic Systems Division (Northrop) facility (EPA Identification No. ILD 005 128 988) in Rolling Meadows, Cook

County, Illinois. The PA was completed on May 5, 1993. PRC gathered and reviewed information from the Illinois Environmental Protection Agency (IEPA) and from EPA Region 5 RCRA files. The VSI was conducted on May 21, 1993. It included interviews with facility representatives and a walk-through inspection of the facility. PRC identified eight SWMUs and one AOC at the facility.

The VSI is summarized and 18 inspection photographs are included in Appendix A. Field notes from the VSI are included in Appendix B. Results from 1987 soil and groundwater sampling are included in Appendix C. A boring log, representative of the soil geology is included in Appendix D.

2.0 FACILITY DESCRIPTION

This section describes the facility's location; past and present operations; waste generating processes and waste management practices; history of documented releases; regulatory history; environmental setting; and receptors.

2.1 FACILITY LOCATION

The Northrop facility is located at 600 Hicks Road in Rolling Meadows, Cook County, Illinois. Figure 1 shows the location of the facility in relation to the surrounding topographic features (latitude 42° 05' 50" N and longitude 88° 02' 10" W). The three manufacturing buildings cover about 940,000 square feet of a 52-acre property in a light manufacturing area.

The facility is bordered on the north by trucking company and the village of Palatine, on the east by a chemical manufacturing company, on the south by a nail manufacturing company, and on the west by Hicks Road and the village of Palatine. A baseball field is located northeast of the facility.

2.2 FACILITY OPERATIONS

The Northrop facility is currently used as a research and development (R&D) and manufacturing facility to produce electronic countermeasures for the U.S. Department of Defense (DOD) and employs about 2,700 people. The components of these products are manufactured at the facility and include printed wire boards (PWB), electron tubes, and micro-integrated circuits (MIC).

Raw materials for production include copper sheeting, photoresist strips, lubricants, epoxies, polyurethane sealants, silicone adhesives, and solvents. Raw material chemicals are purchased in 5- and 55-gallon quantities and stored indoors.

PWB production began at the Northrop facility in 1983. To produce a PWB layer, a plastic circuit card is covered with copper sheeting. A photoresist strip, which is made of acrylic, is applied to the copper sheeting. An image of electronic circuitry is photographed onto the photoresist strip and developed at the facility like a photograph. The circuit card is then placed in a cupric chloride acid

bath to etch off copper. After the acid bath, the PWB is rinsed in a caustic bath. Finally, the photoresist strip is removed in an acid bath leaving the electronic circuitry on the PWB. To permit solder points to be adhered to the PWB later in the production process, a photoresist strip is again applied to the PWB. The PWB is placed in a lead-tin plating bath and rinsed in a cyanide bath. The photoresist strip is removed in an acid bath and the lead-tin points remain. This entire process may be repeated in order to produce several layers of circuitry on one PWB. The number of processes and baths a PWB goes through varies depending on the PWB specifications.

To adhere solder points to a completed PWB, the PWB is cleaned with freon. Solder points are attached to the lead-tin points. Solder flux is removed from the PWB with freon. The PWB is cleaned with freon once more before a coat of polyurethane sealant is applied to it.

Several PWBs can be laminated together to produce a PWB panel. Some PWB panels are drilled through in order to create electronic connections between the layers. The PWB panel is placed in a copper plating bath to fill the holes with a copper conduit. Panels are cleaned in a cyanide bath. Some PWBs require a protective nickel coating around the board edges to protect the metal. The PWB is placed in a nickel plating bath and rinsed in a cyanide bath. Other metal plating baths, such as gold and silver, are used on an as-needed basis. Most metal plating baths are replenished with additional metals and are not disposed of. Acid baths, caustic baths, and cyanide baths are either treated or disposed of.

Electron tube production began at the facility in the early 1970s. Electron tubes are made up of a series of intricately assembled, small metal components that resemble a stack of washers. The metal components are either machined in-house or purchased from other companies. Metal components are plated with nickel, copper, silver, or gold in plating baths in order to allow for a proper braze. After metal plating, the tubes are rinsed in a cyanide bath. To form a tube, metal components are usually brazed together but they can also be gas welded. Once a tube is formed it is evacuated to remove the air. A tube is cleaned frequently with freon or 1,1,1 trichloroethane (1,1,1 TCA). The tube is housed in a tin casing and wiring leads are soldered onto the casing. Finally, a silicone rubber is applied to seal the entire casing and wires. The finished tube is stored and sold as spare parts for radar jamming in older defense-related products.

MIC manufacturing consists of a ceramic substrate onto which various resistive and conductive components are added. Typically, silver and gold inks are printed on the ceramic substrate using a silk screening process. The MIC is degreased using freon. In order to fine-tune the electronic tolerances of the metal inks, a laser is used to remove ink from the ceramic substrate. The MIC is degreased again and tested. Next, transistors and resistors are manually and mechanically wire bonded to the MIC. The MIC is degreased again. Smaller components are attached to the MIC using adhesives. The MIC is degreased again, placed in a tin casing, and sealed. Sometimes a MIC will require etching in a nitric acid bath. Sometimes toluene is used as a degreaser.

These manufacturing activities generate waste acids (D002, D007, D008), waste caustics (D002, D008), waste cyanides (F007, D002, D011), waste filters (D011), spent solvents (F001, F002, F005, D001, D006, D007, D018, D035, D039), and miscellaneous wastes such as solvent-contaminated waste oil (F001), solvent-contaminated rags (F005, D001, D035), spent photodeveloper (D008), laboratory packs of expired chemicals (LABP), empty drums, and raw material drum rinsate. The facility's wastewater treatment plant (WWTP), located in Room 6409 (SWMU 1) generates nonhazardous filter bags, nonhazardous photoresist solids, copper sheeting, and treated wastewater.

Hazardous wastes generated throughout the facility are collected in Satellite Accumulation Areas (SAA) (SWMU 8) and then transferred to accumulation areas (SWMUs 3 and 5) prior to off-site disposal. Wastewaters generated on site are drummed at their source and transferred to the WWTP (SWMU 1) where they are pretreated prior to discharge to the municipal sewer system. Wastewaters that cannot be treated on site are drummed and stored in SWMU 3 prior to off-site disposal. Most of the facility's spent freon is reclaimed on-site in a still (SWMU 6).

Prior to 1967, the property was farmland. The facility began operations in 1967 as a HAM radio manufacturer in a 208,000-square-foot building owned and operated by Hellicrafters, Inc. (Hellicrafters). Shortly thereafter, Northrop Corporation took over Hellicrafters, and the facility began DOD-related electronics manufacturing. Northrop has either constructed or expanded its manufacturing buildings in 1977, 1981, 1984, 1987, and 1993. The facility currently consists of three manufacturing buildings covering 940,000 square feet on a 52-acre parcel of land.

Prior to 1979, a marshy area was located in the northeast portion of the facility where a parking lot is currently located. This area was filled in 1979 to 1980, when the parking lot and retention pond were built (PRC 1994).

Solid wastes generated from facility operations and the SWMUs where they are managed are discussed in detail in Section 2.3.

2.3 WASTE GENERATION AND MANAGEMENT

This section describes waste generation and management at the Northrop facility. The facility's SWMUs are identified in Table 1. The facility layout, including SWMUs and AOCs, is shown in Figure 2. The facility's waste streams are summarized in Table 2.

The manufacturing operations that generate wastes include developing, metal finishing, metal plating, and degreasing. These operations generate waste acids (D002, D007, D008), waste caustics (D002, D008), waste cyanides (F007, D002, D011), waste filters (D011) from cyanide baths, and spent solvents (F001, F002, F003, F005, D001, D006, D007, D018, D035, D039). Miscellaneous wastes generated throughout the facility include solvent-contaminated waste oil (F001) from machining pumps, solvent-contaminated rags (F005, D001, D035), spent photodeveloper (D008), lab packs of expired chemicals (which the facility designates as LABP) of expired chemicals, and nonhazardous empty drums. Rinsing out empty raw material drums generates raw material drum rinsate. The facility's WWTP (SWMU 1) treats spent acid baths, spent rinsing baths, and raw material drum rinsate, and generates nonhazardous filter bags, photoresist solids, copper sheeting, and treated wastewater. According to facility representatives, all wastes have been taken off-site for disposal since 1975. No records of on-site disposal of chemicals at the facility exist (PRC 1994). The waste streams produced by the manufacturing operations and the facility's waste management practices are discussed below.

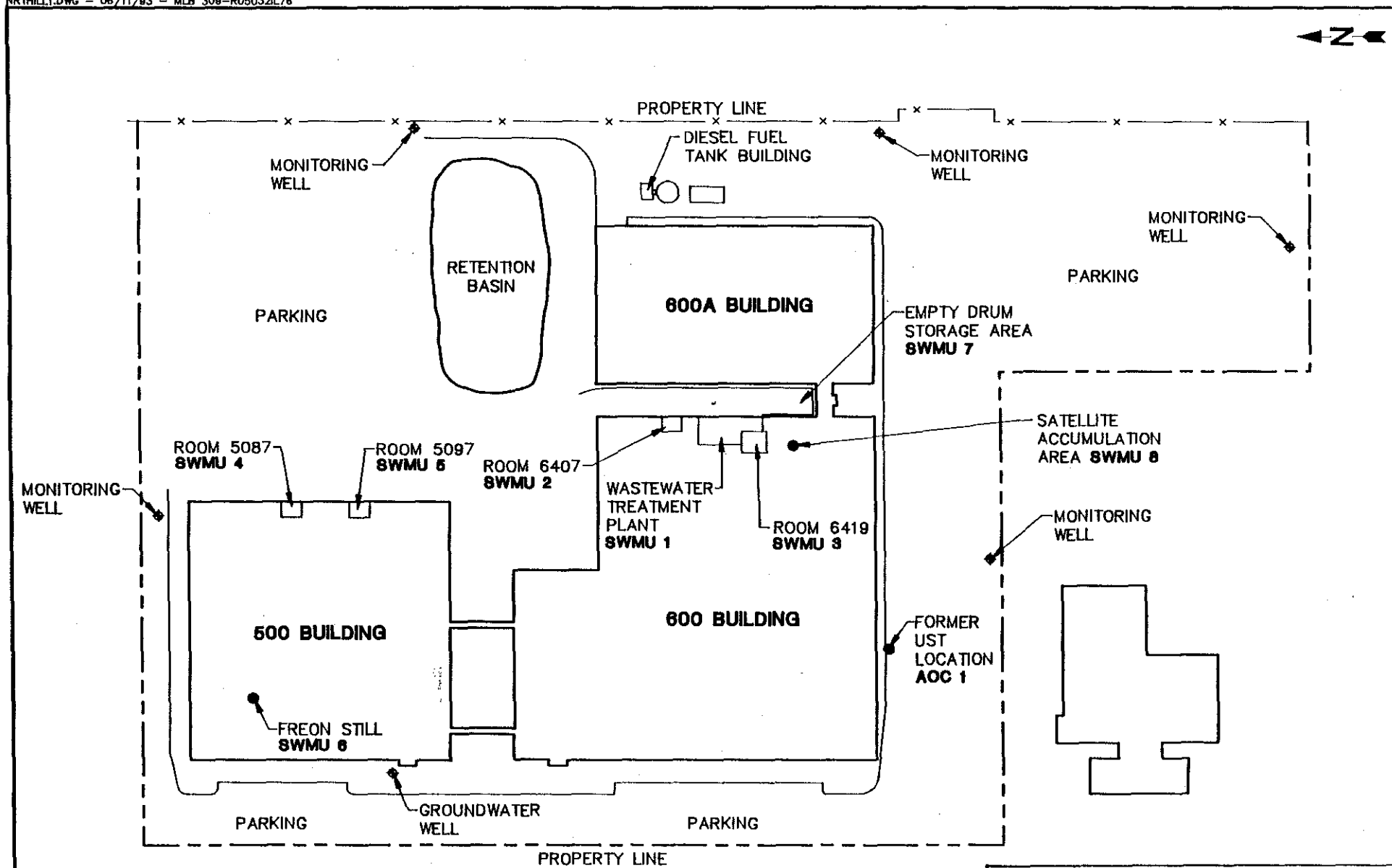
Metal finishing operations occur during PWB and MIC production and generate some waste acids (D002, D007, D008) that cannot be treated in the WWTP (SWMU 1). Waste acids generated from finishing baths are either accumulated in 5-gallon containers or 55-gallon drums located in SAAs (SWMU 8). Once a container is full, it is moved to Room 6419 (SWMU 3); contents of 5-gallon

TABLE 1
SOLID WASTE MANAGEMENT UNITS

<u>SWMU Number</u>	<u>SWMU Name</u>	<u>RCRA Hazardous Waste Management Unit^a</u>	<u>Status</u>
1	Wastewater Treatment Plant	Yes	Active; RCRA-closed in 1987
2	Room 6407	Yes	Inactive; RCRA-closed in 1987
3	Room 6419	No	Active; less than 90-day storage
4	Room 5087	Yes	Inactive; RCRA-closed in 1987
5	Room 5097	Yes	Active; less than 90-day storage; RCRA-closed in 1987
6	Freon Stills	No	Active
7	Empty Drum Storage Area	No	Active
8	Satellite Accumulation Areas	No	Active

Note:

^a A RCRA hazardous waste management unit is one that currently requires or formerly required submittal of a RCRA Part A or Part B permit application.



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NORTHROP CORPORATION ROLLING MEADOWS, ILLINOIS
FIGURE 2
FACILITY LAYOUT
NOT TO SCALE PRC ENVIRONMENTAL MANAGEMENT, INC.

TABLE 2
SOLID WASTES

<u>Waste/EPA Waste Code^a</u>	<u>Source</u>	<u>Solid Waste Management Unit^b</u>
Waste acids/D002, D007, D008	PWB and MIC production	1, 2, 3, 4, 8
Waste caustics/D002, D008	PWB production	1, 2, 3, 4, 8
Waste cyanides/F007, D002, D011	PWB and electron tube production	1, 2, 3, 4, 8
Waste filters/D011	PWB and electron tube production	3, 8
Spent solvents/F001, F002, F003, F005, D001, D006, D007, D018, D035, D039	PWB and MIC production	1, 2, 4, 5, 6, 8
Solvent-contaminated waste oil/F001	Hot oil solder reflow machining pumps	5, 8
Solvent-contaminated rags/F005, D001, D035	Manufacturing; R&D	5, 9
Spent photodeveloper/D008	PWB manufacturing	5, 9
Raw material drum rinsate/D002, D007, D008	Drum cleaning	1
Lab packs/LABP ^c	Expired chemicals	5
Empty drums/NA	Manufacturing	7
Filter bags/NA	WWTP	1, 3
Photoresist solids/NA	WWTP	1, 3
Copper Sheeting/NA	WWTP	None
Treated wastewater/NA	WWTP	1

Notes:

^a Not applicable (NA) designates nonhazardous waste.

^b "None" indicates that the waste stream is not managed on site.

^c This is the facility's waste code designation.

containers are transferred into a 55-gallon drum. Full drums in Room 6419 (SWMU 3) are prepared for off-site disposal. Since 1989, Clean Harbors of Chicago, Inc. (Clean Harbors) has transported the drums in a trailer truck to either its Chicago, Illinois or Braintree, Massachusetts facilities for wastewater treatment. The facility generated about 34,400 gallons of waste acids (D002, D007, D008) in 1992. Between 1986 and 1988, some waste acids (D002, D007, D008) were treated by Chem Clear, Inc. (CCI), of Chicago, Illinois. Between 1983 and 1990 some waste acids (D002, D007, D008) were also treated by Envirite Corporation (Envirite) in Harvey, Illinois. Waste acids that can be treated in the WWTP (SWMU 1) are placed in 55-gallon drums at the source of generation, stored next to the WWTP (SWMU 1), and treated on-site in batches.

Metal finishing operations also generate some waste caustics (D002, D008), used as rinses after acid baths, that cannot be treated in the WWTP. Waste caustics generated from rinsing baths are either accumulated in 5-gallon containers or 55-gallon drums located in SAAs (SWMU 8). Once a container is full, it is moved to Room 6419 (SWMU 3); contents of 5-gallon containers are then transferred into a 55-gallon drum. Full drums in Room 6419 (SWMU 3) are prepared for off-site disposal. Since 1990, Clean Harbors has transported the drums of waste in a trailer truck to its Chicago, Illinois facility for wastewater treatment. Since 1983, C. P. Inorganics, Inc. (CPI), has transported drums of waste in a trailer truck to its Joliet, Illinois facility for reclaiming. In 1992, the facility generated about 45,700 gallons of waste caustics (D002, D008), of which about 330 gallons were treated off-site by Clean Harbors and about 3,400 gallons were reclaimed off-site by CPI. Between 1983 and 1990, Envirite transported the wastes to its treatment facility. Between 1983 and 1989, some wastes were also treated by CCI. Waste caustics that can be treated in the WWTP (SWMU 1) are placed in 55-gallon drums at the source of generation, moved to be stored next to the WWTP (SWMU 1), and treated on-site in batches in the WWTP (SWMU 1).

Metal plating operations occur during PWB and electron tube production and generate waste cyanides (F007, D002, D011), none of which can be treated in the WWTP (SWMU 1). Waste cyanides generated from rinsing baths are either accumulated in 5-gallon containers or 55-gallon drums located in SAAs (SWMU 8). Once a container is full, it is moved to Room 6419 (SWMU 3); contents of 5-gallon containers are then transferred into a 55-gallon drum. Full drums in Room 6419 (SWMU 3) are prepared for off-site disposal. Since 1987, Cyanokem, Inc., has transported the drums of wastes in a trailer truck to its Detroit, Michigan facility for treatment. The facility generated about 30

gallons of waste cyanides in 1992. Once every 3 to 5 years, the facility generates about 55 gallons of potassium gold cyanide (F007), which is transported off site by SET Environmental Services, Inc., to the Handy and Harman, Inc. facility in Villa Park, Illinois for reclamation. In 1992, the facility generated about 15 gallons of this waste cyanide. Between 1983 and 1986, waste cyanide was treated by Nelson Industrial Services, Inc., in Detroit, Michigan.

Between 1983 and 1987, waste acids (D002, D007, D008), waste caustics (D002, D008), and waste cyanides (F007, D002, D011) were stored in Room 6409, where the WWTP (SWMU 1) is currently located. In addition, these wastes were stored in Room 6407 (SWMU 2) and Room 5087 (SWMU 4). No information is available on the specific wastes or waste quantities stored in these rooms during this time period.

Metal plating operations also generate waste filters (D011) used in silver cyanide plating baths for PWB and electron tube manufacturing. The facility began using filters in 1990. The filters are accumulated in 5-gallon buckets located in SAAs (SWMU 8) and transferred to 55-gallon drums in Room 6419 (SWMU 3). Since 1991, Environmental Systems Company, Inc. (ENSCO), has transported the drums of waste in a trailer truck to its incinerator in El Dorado, Arkansas. In 1992, the facility generated 193 pounds of waste filters.

Degreasing operations use freon, 1,1,1 TCE, and toluene. As a result, a variety of spent solvents (F001, F002, F003, D001, D006, D007, D018, D035, D039) are generated. All spent solvents are either accumulated in 5-gallon containers or 55-gallon drums located in SAAs (SWMU 8). Once a container is full, it is moved to Room 5097 (SWMU 5); contents of 5-gallon containers are then transferred into a 55-gallon drum. About 90 percent of spent freon (F001) regenerated in the Freon Stills (SWMU 6). Still bottoms from the Freon Stills (SWMU 6) are placed in 5-gallon buckets, transferred into 55-gallon drums, and stored less than 90 days in Room 5097 (SWMU 5). The 10 percent of spent freon that is not regenerated is accumulated in 55-gallon drums in Room 5097 (SWMU 5).

Full drums of all solvent wastes are prepared for off-site disposal. Since 1987, Safety-Kleen Corporation (Safety-Kleen) has transported the drums of all spent solvent wastes in a trailer truck to its fuel blending facility in Dolton, Illinois. Thereafter, the blended wastes are transported to cement

kilns to be burned as fuel. In 1992, the facility generated about 3,670 gallons of spent solvents. Between 1980 and 1989, LWD, Inc. transported some of the wastes to their incinerator in Calvert City, Kentucky. Between 1980 and 1988, BDT, Inc., transported some of the wastes to its incinerator in Clarence, New York. In 1986, McKesson EnviroSystems, Inc. transported some of the wastes to its reclamation facility in Dolton, Illinois. No information is available on disposal practices prior to 1980.

Between 1983 and 1987, spent solvents (F001, F002, F003, F005, D001, D006, D007, D018, D035, D039) were stored in Room 6407 (SWMU 2), Room 5087 (SWMU 4), and Room 6409, where the WWTP (SWMU 1) is currently located. No information is available on the specific wastes or waste quantities stored in these rooms during this time period.

In 1989, the facility generated waste isopropanol (F003) from degreasing operations. This waste was either accumulated in 5-gallon containers or 55-gallon drums located in SAAs (SWMU 8). Once a container was full, it was moved to Room 5097 (SWMU 5); contents of 5-gallon containers were transferred into a 55-gallon drum. Full drums were prepared for off-site disposal. LWD, Inc., transported the drums to its Calvert City, Kentucky facility for incineration. In 1989, the facility generated about 385 gallons of waste isopropanol.

Solvent-contaminated waste oil (F001) is generated from hot oil solder reflow machining pumps. Solvent-contaminated waste oil is accumulated in 5-gallon buckets located in SAAs (SWMU 8). Once the container is full, it is moved to Room 5097 (SWMU 5) and its contents transferred to a 55-gallon drum. Full drums of waste are prepared for off-site disposal. Since 1989, Safety-Kleen has transported the drums of waste in a trailer truck to its fuel blending facility in Dolton, Illinois. Thereafter, the blended wastes are transported to cement kilns to be burned as fuel. In 1992, the facility generated about 1,045 gallons of solvent-contaminated waste oil.

Solvent-contaminated rags (F005, D001, D035) are generated throughout the manufacturing areas and R&D laboratories of the facility. Rags are placed in 5-gallon buckets with self-closing-lid SAAs (SWMU 8) and emptied nightly. The rags are stored in 55-gallon drums in Room 5097 (SWMU 5). Rineco transports drums of rags to its fuel blending facility in Benton, Arkansas where they are shredded. In 1992, the facility generated about 1,680 pounds of solvent-contaminated rags. From

1989 to 1993, ENSCO transported the rags to its El Dorado, Arkansas facility for incineration. Prior to 1989, LWD, Inc., transported the rags to its Calvert City, Kentucky facility for incineration.

Developing the photoresist strips used in PWB production, generates spent photodeveloper (D008). This waste is placed in 5-gallon buckets in SAAs (SWMU 8). Once the container is full, it is moved to Room 5097 (SWMU 5) and its contents transferred into a 55-gallon drum. Full drums of waste are prepared for off-site disposal. Between 1983 and 1989, CCI transported the drums of waste in a trailer truck to its wastewater treatment facility in Chicago, Illinois. In 1989 CCI became Clean Harbors and has transported the drums of waste in a trailer truck to its wastewater treatment facility in Chicago, Illinois. In 1992, the facility generated about 330 gallons of spent photodeveloper.

Occasionally, raw material chemicals expire and require disposal. DOD does not allow the use of expired materials in the products it buys. Northrop, however, re-evaluates chemicals to extend their shelf-life and attempts to find other uses for them because they are not substandard. These chemicals include polyurethane coatings, lubricants, and detergents and are stored in Room 5097 (SWMU 5). If no alternative uses for expired chemicals can be identified, the facility prepares a labpack for off-site disposal. The facility designates the waste code for this waste as LABP. Since the late 1980s, Clean Harbors has transported lab packs in a trailer truck to its treatment facility in Chicago, Illinois. In 1992, the facility disposed of about 630 gallons of expired chemicals. Between 1982 and 1986, U.S. Ecology transported the wastes to its incinerator in Beaty, Nevada.

Empty drums from raw material chemicals are rinsed out using a continuous flow washing unit located near the plating bath lines. This generates raw material drum rinsate, which is treated in the WWTP (SWMU 1). Since 1987, the empty drums have been stacked in the Empty Drum Storage Area (SWMU 7) and have been picked up by either chemical distributors or chemical manufacturers to be reused. Prior to 1987, few drummed chemicals were used at the facility. At that time, empty drums were stored near the areas where the chemicals were being used. Off-site disposal then was the same as current operations.

The facility's WWTP (SWMU 1) became operational in 1990 and is maintained in Room 6409. The WWTP (SWMU 1) receives spent plating baths and rinse waters generated from metal plating operations and treats them in batches. Drums of wastes for the next batch are stored in Room 6409

near the WWTP (SWMU 1). The WWTP (SWMU 1) generates nonhazardous filter bags, photoresist solids, copper sheeting, and treated wastewater. Nonhazardous filter bags are air dried, placed in a 55-gallon SAA (SWMU 8), transferred to Room 6419 (SWMU 3) when full, and disposed of off-site in a landfill by Browning Ferris Industries (BFI). Nonhazardous photoresist solids are pressed to remove water and placed in a 2-cubic-yard hopper. The photoresist solids are then shoveled into 55-gallon drums and stored in Room 6419 (SWMU 3). BFI transports the photoresist solids off site for disposal in a landfill. Nonhazardous copper sheeting is generated from the a recovery tank of the WWTP (SWMU 1) equipped with an electrolytic cell. The copper sheeting is pulled off the cell and stacked nearby and eventually sold to off-site metals recyclers. Nonhazardous treated wastewater is discharged to the Metropolitan Water Reclamation District (MWRD) sewer system. MWRD monitors this effluent stream daily.

The PWB production process that generates spent bath and rinse waters began in 1983. Between 1983 and 1990, spent baths and rinse waters were bulked in 55-gallon drums and stored in Room 6409 (SWMU 1). Once per week, either Envirite or CCI of Chicago, Illinois pumped out the drums into a tanker truck and transported the wastes to its off-site treatment facilities.

2.4 HISTORY OF DOCUMENTED RELEASES

No releases from the facility to the environment have been documented. In 1987, Northrop installed monitoring wells around the northern, eastern, and southern perimeters of the facility property to monitor groundwater quality. This is because Northrop had concerns of industrial activities at neighboring properties; the facility is bordered on the east by a chemical manufacturer. At this time, Northrop collected soil and groundwater samples. Soil sampling results identified arsenic at 1.92 milligrams per kilogram (mg/kg) on the south boundary; arsenic at 1.83 mg/kg and chromium at 22.8 mg/kg on the east boundary; and arsenic at 1.68 mg/kg, chromium at 46.5 mg/kg, and lead at 69.7 mg/kg on the north boundary. Groundwater sampling identified bromoform at 3.6 micrograms per liter on the north boundary (Warzyn 1987). This report did not indicate the source of contamination. Northrop's consultant reported these results were consistent with results expected in an industrial area adjacent to a highway (PRC 1994). A copy of these results are included in Appendix C.

No further soil or groundwater sampling has been conducted at the Northrop facility. During the VSI, PRC did not observe any evidence of releases.

2.5 REGULATORY HISTORY

Northrop submitted a Notification of Hazardous Waste Activity form to EPA on August 15, 1980 indicating the facility both generated and treated, stored, or disposed of hazardous wastes (Northrop 1980a). Northrop submitted a RCRA Part A permit application on November 18, 1980 (Northrop 1980b). The permit application was for a 5,811-gallon container storage area in Room 5097 (SWMU 5), process code S01. Room 5097 (SWMU 5) stored waste solvents (F001, F002, F003, D001, D007). The application did not include electroplating wastes because they were not generated at that time. Information from Baxter and Woodman, Inc. (BAW), indicates Room 5097 (SWMU 5) was used only to store waste solvents (B&W 1986). This permit application erroneously indicated wastes being disposed of in an on-site landfill with an incorrect process code of D80. Waste code F006 was also listed erroneously because the facility did not treat wastewater at that time.

In December 1982, Northrop submitted a revised Part A permit application to increase its hazardous waste container storage capacity to 7,600 gallons (Northrop 1982b). In 1983, the facility began producing PWBs generating waste acids, caustics, and cyanides. In March 1984, Northrop submitted a revised Part A permit application to indicate the facility was increasing its hazardous waste storage capacity to 14,000 gallons and planned to treat about 20 gallons per day of hazardous wastes in Room 6409 (SWMU 1) (Northrop 1984a).

In 1984, Northrop submitted a supplemental waste stream permit application to accept waste from another Northrop plant in Elk Grove Village, Illinois. IEPA denied the application because the facility was not permitted to accept waste for storage (IEPA 1985a). IEPA discussed with Northrop the status of both facilities. IEPA determined that the Elk Grove Village facility could ship no more than 220 pounds of solvent wastes per month to the Rolling Meadows facility without permits or manifests (IEPA 1985b).

In December 1985, Northrop submitted a special waste stream application to store chromic plating bath waste from the Elk Grove Village plant and from a Northrop plant in Palatine, Illinois. IEPA

denied the application because Northrop had not been issued a development or operating permit for waste storage, waste treatment, or waste disposal operations. In addition, the waste analyses submitted with the application did not adequately characterize the wastes (IEPA 1986a). Northrop corrected these deficiencies and was allowed to receive and store wastes generated from other Northrop facilities (IEPA 1986c). A December 1986 compliance inspection conducted by IEPA determined that the wastes were properly manifested and transported from the other facilities, properly stored with wastes generated at the Northrop facility, and properly remanifested and transported for off-site disposal.

Northrop submitted a closure plan for its hazardous waste storage areas in April 1984 (Northrop 1984b). In December 1986, Northrop notified IEPA that the company had retained Baxter and Woodman, Inc. (B&W), to prepare a closure plan and oversee the implementation of the closure plan for the facility's hazardous waste storage areas (B&W 1986). Room 6409 (SWMU 1), Room 6407 (SWMU 2), Room 5087 (SWMU 4), and Room 5097 (SWMU 5) were the units to be closed. In January 1987, Northrop submitted a revised Part A permit application to indicate that Room 6409 (SWMU 1), Room 6407 (SWMU 2), and Room 5087 (SWMU 4) were being used to store volatile wastes (F001, F002, F003, D001, D007) and electroplating wastes (F007) (B&W 1986; Northrop 1987a). This revision did not indicate any treatment process codes, and it returned the waste storage capacity to 5,811 gallons (Northrop 1987a). IEPA received the closure plan on January 8, 1987 and approved it on March 9, 1987 (IEPA 1987b).

Closure included removing wastes and cleaning the four rooms, collecting samples, and disposing of all wastes. The rooms were emptied and cleaned prior to sampling activities. In March and April 1987, wipe samples for cyanide and metals were collected in Room 6409 (SWMU 1), Room 6407 (SWMU 2), Room 5087 (SWMU 4), and Room 5097 (SWMU 5) (B&W 1986). Between April and June 1987, about 60,000 pounds of waste were disposed of off site (B&W 1986). On July 14, 1987, B&W prepared a decontamination report, closure report, and closure certification for Northrop to submit to IEPA (B&W, 1987). On July 20, 1987, Northrop sent IEPA a Part A permit withdrawal request letter (Northrop 1987c).

In August 1987, IEPA determined that the closure of this facility was not conducted in accordance with the approved closure plan. Closure was not approved because the facility did not provide the

location of background samples; closure photographs revealed a significant floor crack in Room 5087 (SWMU 4), floor seams in Room 6407 (SWMU 2) and Room 5097 (SWMU 5), and drum stains on the floor in Room 5097 (SWMU 5). In addition, analyses from wipe samples collected in Room 6409 (SWMU 1), Room 6407 (SWMU 2), Room 5087 (SWMU 4), Room 5097 (SWMU 5) identified elevated levels of chromium, mercury, silver, and nickel (IEPA 1987c).

In October 1987, Northrop responded to the IEPA closure denial. Northrop provided a map of the locations of background samples. Northrop took two cores from the floor crack in Room 5097 (SWMU 5) and provided photographs of the cores. The photographs allegedly showed that the crack did not penetrate the concrete completely. Northrop considered the drum stains on the floor in Room 5097 (SWMU 5) to have been caused by rust. Northrop argued that because background samples were collected from very clean areas, the target goals for a remedial action should be adjusted to the concentrations found in the sampled areas, thereby allowing closure without remedial action (Northrop 1987d).

On November 2, 1987, IEPA inspected the Northrop facility and determined that closure had been completed in accordance with the approved closure plan. On December 21, 1987, IEPA notified Northrop that the agency approved of the closure and had withdrawn the Part A permit application to reflect the facility's status change. In addition, the agency returned Northrop's surety bond (IEPA 1987d).

The Northrop facility's current regulatory status is that of large-quantity generator of hazardous waste. The facility stores hazardous wastes for less than 90 days.

On March 23, 1982, IEPA conducted a RCRA compliance inspection at the Northrop facility. The inspection found numerous paperwork deficiencies including a lack of operating records and a contingency plan at the facility (IEPA 1982). IEPA notified Northrop on May 7, 1982, of the facility's deficiencies, and Northrop responded to the notification on May 24 (Northrop 1982a).

On December 19, 1986, IEPA conducted a RCRA compliance inspection at the Northrop facility. The inspection found that the facility did not have a waste analysis plan (IEPA 1986c; IEPA 1987a).

IEPA notified Northrop of the violations on February 6, 1987. Northrop responded to the notification on February 16, 1987 (Northrop 1987b).

On March 23, 1989, IEPA notified Northrop that the facility had not submitted a 1988 annual report (IEPA 1989). Northrop responded to the violation notice by submitting a 1988 annual report. Northrop considered that since the RCRA storage units were closed that annual reports were no longer required (Northrop 1989).

On July 7, 1988, IEPA conducted an air pollution control inspection at the Northrop facility. The inspection found that the facility did not have an air permit for a laser trimmer of MIC ceramics containing beryllium oxide. On July 21, 1988, IEPA notified Northrop of the violation and instructed the facility to obtain an air permit (IEPA 1988). In December 1988, Northrop submitted an air permit for the laser trimmer. IEPA rejected the permit due to insufficient sample analyses and gave Northrop 60 days to reapply (PRC 1993d). Northrop failed to respond within the allotted time; as a result, IEPA found Northrop in violation of Illinois administrative codes. On February 9, 1990, a hearing was held and Northrop agreed to pay a \$10,000 civil penalty for the violations (Illinois Pollution Control Board 1990). Northrop filed an air permit application for the operations in April 1990, and on April 20, 1990, IEPA issued an air permit (IEPA 1990b). The facility is required to have operating air permits and currently has eight operating air permits. These permits are bubbled to cover other Northrop facilities in Palatine and Elk Grove Village, Illinois. The facility has no history of odor complaints from area residents.

In January 1985, IEPA issued Northrop a water pollution control (WPC) permit to operate water pollution control facilities (IEPA 1985c). This permit covered wastewaters from several production lines, cooling water, and sanitary waste. In February 1986, IEPA issued Northrop a WPC permit to operate an pretreatment recovery unit to remove metals with discharges to MWRD (IEPA 1986b). On January 30, 1990, IEPA issued Northrop a WPC permit to construct the facility's WWTP (IEPA 1990a).

All facility water discharges are to the MWRD which have been permitted and are monitored daily. The facility has no history of water discharge permit violations. Storm water runoff from the facility parking lots and roofs is channelled to a 2.5 acre-retention basin located near the northeast side of the

facility property. The retention basin does not have a discharge to any other sewer or surface water body. All other facility storm water runoff is directed into storm sewers that flow into Salt Creek.

The facility had one underground storage tank (UST) located at the Former Underground Storage Tank Location (AOC 1) on the southwest side of the facility. This UST contained silicone oil that was used as a coolant. It was excavated in 1977; however, no paperwork is available on whether the removal was approved, if the tank was leak-tested, or if any contamination remains.

2.6 ENVIRONMENTAL SETTING

This section describes the climate; flood plain and surface water; geology and soils; and groundwater in the vicinity of the facility.

2.6.1 Climate

The climate in Cook County is cold and snowy in winter and warm in summer. According to information from the U.S. Department of Agriculture (USDA), the average daily temperature in winter is 25 °F and in summer is 71 °F. The lowest average daily temperature is 13 °F in January. The highest average daily temperature is 82 °F in July (USDA 1979).

The average total annual precipitation for the county is 33 inches. Average seasonal snowfall is 39 inches (USDA 1979). The U.S. Department of Commerce (USDOC) lists mean annual lake evaporation for the area at about 30 inches (USDOC, 1968). The 1-year, 24-hour maximum rainfall is about 2.25 inches (USDOC 1963).

The average relative humidity in midafternoon in spring is less than 15 percent; during the rest of the year it is about 61 percent. Humidity is higher at night, and the average at dawn is about 80 percent (USDA 1979).

2.6.2 Flood Plain and Surface Water

Information from the Federal Emergency Management Agency (FEMA) indicates the Northrop facility is not located in a flood plain, but the area has been designated an area of minimal flooding (FEMA 1985). According to facility representatives, the water table is high in the area and the parking lots flood easily (PRC 1993a). The nearest surface water body is Salt Creek, located about 0.75 mile west of the facility. This creek is used for recreation and storm water runoff (PRC 1993b). Salt Creek flows south for about 36 miles to the Des Plaines River.

Storm water runoff from the facility parking lots and roofs flows into the retention basin located on the northeast side of the facility. Aboveground runoff from the Empty Drum Storage Area (SWMU 7) flows into the retention basin, which does not discharge to a sewer or surface water body (IT Corporation 1992). All other storm water runoff is directed to storm water sewers that flow into Salt Creek. Treated wastewater and sanitary water discharges to MWRD, which monitors the effluent daily.

2.6.3 Geology and Soils

Soils on the area of the facility consist of Urban land areas mixed with the Orthents Complex soils that have been altered. The Urban land aspects of the landscape have been covered by buildings and parking lots. The Orthents Complex areas consist of clayey, fine-textured soils. The soils formerly had a surface layer of silt loam, silty clay loam, or silty clay and a subsoil of silty clay or clay. The underlying material was calcareous silty clay loam. This unit is not assigned a suitability subclass. Low spots of Orthents soils collect water and dry slowly. Permeability is variable because the soil material is altered and has been compacted by construction equipment. Runoff is medium to very rapid, depending on slope and vegetation cover (USDA 1979).

Underlying the soils in the vicinity of the facility are thick, Wisconsin age deposits of glacial till (Bogner 1976). The material primarily consists of clay and gravel from glacial outwash (Bogner 1976). Boring logs from monitoring wells installed on site indicate a predominance of stiff, silty clay (Warzyn Engineering, Inc. 1987). A sample boring log is included in Appendix D. The total

thickness of the unconsolidated units varies between 80 and 150 feet (Illinois Department of Public Health 1967).

Silurian age bedrock underlying the glacial deposits consists of Niagaran Dolomite. Ordovician age bedrock underlying the glacial deposits is composed of Maquoketa Shale (Bogner 1976).

2.6.4 Groundwater

Groundwater in the vicinity of the facility is encountered in shallow, perched aquifers; sand and gravel deposits in the glacial till; and deeper bedrock formations. Shallow aquifers exist between 4 and 30 feet below ground surface (bgs), at times daylighting in depressions. Sand and gravel deposits within the glacial till are encountered between 30 and 75 feet bgs. Dolomite and shale bedrock aquifers are located between 150 and 750 feet bgs; sandstone bedrock aquifers are located over 750 feet bgs (Illinois Department of Public Health, 1967; Bogner 1976).

Groundwater flow in shallow aquifers beneath the facility is unknown. Groundwater is encountered about 7 to 18 feet bgs. Groundwater flow appears to be northeast. Groundwater flow of other aquifers in the vicinity of the facility is unknown but most likely follows the topography of the area toward the south and east (USGS 1961; Bogner 1976).

2.7 RECEPTORS

The Northrop facility is located at 600 Hicks Road in Rolling Meadows, Cook County, Illinois. The facility property occupies 52 acres in a light manufacturing area. Rolling Meadows has a population of about 20,000, and Palatine has a population of about 30,000. The facility is bordered on the north by light manufacturing companies and the village of Palatine, on the east and south by light manufacturing companies, and on the west by Hicks Road and the village of Palatine. A baseball field is located near the facility's northeast corner. The nearest school is located about 0.75 mile northwest of the facility. The nearest residence is located about 0.25 mile north of the facility. The facility's east boundary is fenced. Security guards control the entrances to the entire facility 24 hours per day because of Northrop's DOD-related activities.

The nearest surface water body, Salt Creek, is located about 0.75 mile west of the facility and is used for storm water runoff and recreational purposes (PRC 1993b). Other surface water bodies in the area include small marshy areas in low-lying areas, ephemeral streams, and small unnamed lakes (USGS 1961). These surface water bodies are not used for drinking water purposes. The primary source of drinking water in the vicinity of the site is Lake Michigan. The intakes on Lake Michigan are located about 30 miles southeast of the facility (PRC 1993b; PRC 1993c).

Groundwater is used as a municipal and private water supply. The City of Rolling Meadows has one municipal well located 0.25 mile south and downgradient of the facility. This well is about 1,600 feet deep and draws water from a sandstone aquifer. About 60,000 gallons per month of this groundwater is blended with the Lake Michigan water prior to distribution (PRC 1993c). The Village of Palatine has six municipal wells. These wells are estimated to be about 170 feet deep and draw water from a limestone aquifer. Three of these wells are located within a 3-mile radius of the site: 0.25 mile north, 2 miles northwest, and 2.5 miles southwest of the facility. Groundwater from these wells is blended with Lake Michigan water prior to distribution only in emergencies and has not been used in over 10 years (PRC 1993b). Private drinking water wells within a 3-mile radius of the site are located about 1 mile south and 1.5 miles southwest of the facility in Rolling Meadows (PRC 1993b; PRC 1993c).

No sensitive environments exist at the facility. The nearest sensitive environment is a 25-acre wetland located about 1.5 miles northwest of the facility (USGS 1961). Endangered species listed by the U.S. Department of the Interior (DOI) for Cook County include Peregrine falcon (breeding habitat) and Prairie bush-clover (U.S. DOI 1989). Prior to 1979, a marshy area was encountered in the northeast corner of the facility where the parking lot is currently located. The marshy area was filled in when the retention pond was built in 1979-1980 (PRC 1994).

3.0 SOLID WASTE MANAGEMENT UNITS

This section describes the eight SWMUs identified during the PA/VSI. The following information is presented for each SWMU: description of the unit, dates of operation, wastes managed, release controls, history of documented releases, and PRC's observations. Figure 2 shows the SWMU locations.

SWMU 1

Wastewater Treatment Plant

Unit Description:

This unit is maintained indoors on the east central side of 600 Building. This unit currently covers about 2,000 square feet. Spent acid and caustic baths are treated in batches, some of which are staged in 55-gallon drums on the north side of the room. This unit also treats raw material drum rinsate. Prior to closure, this unit measured 400 square feet and was used to store corrosive wastes and raw material chemicals.

Date of Startup:

This unit began operations in 1983 for corrosives waste storage. Between 1984 and 1987, this unit was used for raw material chemicals storage. In 1990 the room was enlarged and the WWTP began operation.

Date of Closure:

In 1984, the facility stopped storing wastes in this unit and began storing raw material chemicals. In 1987, IEPA approved RCRA closure of the unit.

Wastes Managed:

This unit treats waste acids and waste caustics generated from metal finishing baths. Raw material drum rinsate is also treated. The WWTP generates nonhazardous filter bags and nonhazardous photoresist solids, which are disposed of off site in a municipal landfill; copper sheeting, which is recycled; and treated wastewater, which is discharged to MWRD and monitored daily. Between 1983

and 1984, this unit managed waste acids (D002, D007, D008), waste caustics (D002, D008), waste cyanide (F007, D002, D011), and spent solvents (F001, F002, F003, F005, D001, D006, D007, D018, D035, D039) stored in 55-gallon drums. No information is available on whether these incompatible wastes were isolated from one another. These wastes were either incinerated, treated, or reclaimed off site. In 1984, the facility stopped storing wastes in the unit, and from 1984 to 1987 raw material chemicals were stored in the unit.

Release Controls:

This unit has always been maintained indoors and equipped with a sprinkler system and an emergency shower. The floors are recessed and sealed with an epoxy coating. No floor drains or windows are present in this unit.

**History of
Documented Releases:**

No releases from this unit have been documented.

Observations:

PRC observed that this unit was in good condition and wastes were being well managed (see Photograph No. 1). The filter bags were air dried and then placed in a 55-gallon drum. Photoresist solids were pressed dry and dropped into a hopper (see Photograph No. 2) prior to being shoveled into a 55-gallon drum that was about half full. Copper sheeting was stacked near the ionizing unit that generates the copper sheeting (see Photograph No. 3).

SWMU 2

Room 6407

Unit Description:

This unit is maintained indoors on the east central side of 600 Building north of Room 6409 (SWMU 1). This unit is currently used for raw material chemical storage. This unit was used to store hazardous wastes in 55-gallon drums for less than 90 days between 1983 and

1984. This room measures 400 square feet and had a concrete floor. No floor drains are present in this room.

Date of Startup: This unit began operations around 1983 for waste storage. Since 1984, this unit has been used for raw material chemicals storage.

Date of Closure: In 1984, the facility stopped storing wastes in this unit and began storing raw material chemicals. In 1987, IEPA approved RCRA closure of the unit.

Wastes Managed: No wastes are currently managed in this unit. Between 1983 and 1984, this unit managed waste acids (D002, D007, D008), waste caustics (D002, D008), waste cyanides (F007, D002, D011), and spent solvents (F001, F002, F003, F005, D001, D006, D007, D018, D035, D039) stored in 55-gallon drums. No information is available on whether these incompatible wastes were isolated from one another. These wastes were either incinerated, treated, or reclaimed off site.

Release Controls: This unit has always been maintained indoors and equipped with a sprinkler system. The floors are recessed and were covered with an epoxy coating when the unit stored wastes. This unit had a floor drain that was filled with concrete in late 1984. This drain was connected to the facility's sanitary sewers which discharged to and were monitored daily by MWRD. This unit is equipped with explosion proof lighting, blow-out panels, and a blow-off roof. No windows are present in this unit.

History of Documented Releases: No releases from this unit have been documented.

Observations: During the VSI, no wastes were stored in this unit. The unit currently stores freon and flammable raw materials (see Photograph No. 4).

The floor has seams, and PRC observed some cracks. The epoxy coating on the floor appeared to be eroding. PRC observed some staining on the floor but could not determine the source. PRC did not observe the floor drain that had been filled in 1984.

SWMU 3

Room 6419

Unit Description:

This unit is maintained indoors on the east central side of 600 Building south and adjacent to the WWTP (SWMU 1). This unit is currently used to store all hazardous corrosive wastes in drums that are to be shipped off site for treatment. This unit measures about 800 square feet and has a concrete floor that is tiled in some areas, bare in others, and epoxy-coated in others. No floor drains are present in this room. This room was not included on the facility's original or revised Part A permit applications.

Date of Startup:

This unit began operation in 1988.

Date of Closure:

This unit is active for storing hazardous wastes for less than 90-days.

Wastes Managed:

This unit manages waste acids (D002, D007, D008), waste caustics (D002, D008), waste cyanides (F007, D002, D011), waste filters (D011), nonhazardous filter bags, and nonhazardous photoresist solids. Berms and walls are used to keep incompatible wastes separated. The hazardous wastes are transported off site for either treatment or reclamation. The nonhazardous wastes are disposed of off site in a municipal landfill.

Release Controls:

In this unit, the northern half of the floor is bermed and has an epoxy-coated concrete area, a tiled concrete area, and a bare concrete area. The southern half of the floor is bare concrete. The room is equipped

with a sprinkler system. No floor drains or windows are present in this unit.

**History of
Documented Releases:**

No releases from this unit have been documented.

Observations:

At the time of the VSI, 3 55-gallon drums of waste cyanide were located under a ventilation hood. At this hood, 5-gallon buckets of wastes, collected in SAAs (SWMU 8), are transferred into 55-gallon drums. This vent has been operating since 1989 and leads directly outdoors. In addition to these drums, the room contained 7 55-gallon drums of waste acids, 13 55-gallon drums of waste caustics, 7 drums of waste cyanides, and 2 55-gallon drums of nonhazardous filter bags. A concrete berm has been constructed in the middle of the room (see Photograph No. 5). PRC observed some drum ring marks on the floor south of the bermed area.

SWMU 4

Room 5087

Unit Description:

This unit is maintained indoors on the east central side of the 500 Building. This unit is currently used as a testing facility for finished products but was used to store hazardous wastes in 55-gallon drums between 1982 and 1984. This room measures 400 square feet and has a tiled concrete floor. No floor drains are present in this room.

Date of Startup:

This unit began storing waste for less than 90 days around 1983. Between 1984 and 1987, this unit was used for raw material chemicals storage. Currently, the unit is used for testing finished products.

Date of Closure:

In 1984, the facility stopped storing wastes in this unit and began storing raw material chemicals. In 1987, IEPA approved RCRA closure of the unit.

Date of Closure: In 1987, IEAP approved RCRA closure of the unit. This unit is currently used for less than 90-day storage of hazardous waste.

Wastes Managed: This unit manages spent solvents (F001, F002, F003, F005, D001, D006, D007, D018, D035, D039), solvent-contaminated waste oil (F001), solvent-contaminated rags (F005, D001, D035), spent photodeveloper (D008), and LABPs of expired chemicals. These wastes are transported off site for either fuel blending or treatment.

Release Controls: This unit has always been maintained indoors and equipped with a sprinkler system. The floors are recessed and partially covered with an epoxy coating. This unit has no floor drains and no windows. This unit is equipped with explosion proof lighting, blow-out panels, and a blow-off roof.

History of Documented Releases: No releases from this unit have been documented.

Observations: At the time of the VSI, two 55-gallon drums of spent freon were located under a ventilation hood (see Photograph No. 7). At this hood, 5-gallon buckets of wastes, collected in SAAs (SWMU 8), are transferred into 55-gallon drums. This vent has been operating since 1981 and leads directly outdoors, but it is not covered by an operating permit. The unit also stored eight 55-gallon drums of spent solvents, one 55-gallon drum of solvent-contaminated waste oil, one 5-gallon bucket of solvent-based paint, seven 55-gallon drums of nonhazardous waste, and six empty 55-gallon drums (see Photograph No. 9). PRC observed stains on the floor and areas where the epoxy coating is wearing away. No floor drains were observed in this unit. Shelving on the north side of the room stores expired chemicals that are awaiting other uses (see Photograph No. 8).

SWMU 7**Empty Drum Storage Area****Unit Description:**

This unit is maintained on an asphalt paved area outdoors between the 600 Building and the 600A Building. The total area used for drum storage is about 650 square feet. Empty drums from raw material chemicals are rinsed in a continuous-flow washer for a few minutes in the PWB production wet process area in Room 6424. The rinse water is treated in the WWTP (SWMU 1). The drums are then stored outdoors to be picked up by chemical distributors or manufacturers for reuse.

Date of Startup:

This unit is estimated to have begun operating in 1987.

Date of Closure:

This unit is active.

Wastes Managed:

This unit manages empty drums that contained raw material acids, caustics, 1,1,1 TCA, and toluene. Prior to storage, the drums are rinsed. Empty drums are picked up by chemical distributors and manufacturers to be reused. Prior to 1987, few drummed products were used. At that time, empty drums were stored near the areas where they were used. Off-site disposal was identical to current management practices.

Release Controls:

The drums are rinsed and drained prior to storage. The pavement slopes to a storm water sewer that flows into the retention basin (IT 1992).

**History of
Documented Releases:**

No releases from this unit have been documented.

Observations:

PRC observed empty drums stored on their sides up to five drums high. Drums are stored on east and west sides of the pavement

between the two buildings. The pavement slopes north toward a storm water sewer. At the time of the VSI, about 100 drums were being stored (see Photograph Nos. 11 and 12). PRC observed a 1.5-foot-radius stain of unknown origin on the asphalt about 20 feet north of the drum storage and upgradient from the storm sewer. It appeared this stain could have been from trucks parked in the area to pick up drums.

SWMU 8

Satellite Accumulation Areas

Unit Description:	These areas are maintained indoors and are located near production areas and laboratories. These areas consist of 5-gallon buckets or 55-gallon drums.
Date of Startup:	These areas began operating in 1967.
Date of Closure:	These areas are active.
Wastes Managed:	These units manage waste acids (D002, D007, D008), waste caustics (D002, D008), waste cyanides (F007, D002, D011), spent solvents (F001, F002, F003, F005, D001, D006, D007, D018, D035, D039), solvent-contaminated waste oil (F001), solvent-contaminated rags (F005, D001, D035), spent photodeveloper (D008). These wastes are stored in either 5-gallon buckets or 55 gallon drums for treatment or reclamation off site.
Release Controls:	All containers are stored closed and maintained indoors.
History of Documented Releases:	No releases from these areas have been documented.

Observations:

PRC observed numerous satellite accumulation areas throughout the facility, consisting of a variety of containers (see Photograph Nos. 13 through 17). All containers were stored closed and appeared to be in good condition. Floor drains were not present near these areas except for drums in the PWB area. The PWB area has floor drains and a sump that are connected to the facility's WWTP.

4.0 AREAS OF CONCERN

PRC identified one AOC during the PA/VSI. This AOC is discussed below; its location is shown in Figure 2.

AOC 1 Former Underground Storage Tank Location

This AOC is located outside the southwest corner of the 600 Building (see Photograph No. 18). This 500-gallon, steel UST was installed about 1971 and was used to store a silicone-oil coolant. The tank was excavated in 1977, but no soil sampling or leak testing was conducted to verify that no releases to subsurface soils had occurred. No documentation exists of state or local approval of the tank removal. According to facility representatives, the tank was taken off site and used to store diesel fuel, implying that the tank was in good condition.

RELEASED
DATE 7/18/80
RIN #
INITIALS STV

ENFORCEMENT
CONFIDENTIAL

5.0 CONCLUSIONS AND RECOMMENDATIONS

The PA/VSI identified eight SWMUs and one AOC at the Northrop facility. Background information on the facility's location; operations; waste generating processes and waste management practices; history of documented releases; regulatory history; environmental setting; and receptors is presented in Section 2.0. SWMU-specific information, such as the unit's description, dates of operation, wastes managed, release controls, history of documented releases, and observed condition, is presented in Section 3.0. AOCs are discussed in Section 4.0. Following are PRC's conclusions and recommendations for each SWMU and AOC. Table 3, located at the end of this section, summarizes the SWMUs and AOCs at the facility and the recommended further actions.

SWMU 1 Wastewater Treatment Plant

Conclusions: Between 1983 and 1984, this unit was used to store a variety of wastes generated at the facility. IEPA approved closure of this unit in 1987. The potential for release to environmental media is low.

Recommendations: PRC recommends no further action for this SWMU at this time.

SWMU 2 Room 6407

Conclusions: Between 1983 and 1984, this unit was used to store a variety of wastes generated at the facility. IEPA approved closure of this unit in 1987. The unit is maintained indoors and is currently used for raw material chemicals storage. The potential for release to environmental media is low.

Recommendations: PRC recommends no further action for this SWMU at this time.

SWMU 3 Room 6419

Conclusions: This unit began operating in 1988 and is currently used to store for less than 90 days any hazardous corrosive waste that cannot be treated in the WWTP.

The unit is maintained indoors. The potential for release to environmental media is low.

Recommendations: PRC recommends applying epoxy to bare concrete areas on the southern half of the room. PRC also recommends determining if a distinct air permit is needed for the exhaust vent.

SWMU 4 Room 5087

Conclusions: Between 1983 and 1987, this unit was used to store a variety of wastes generated at the facility. IEPA approved closure of this unit in 1987. The unit is maintained indoors and is currently used for testing finished products. The potential for release to environmental media is low.

Recommendations: PRC recommends no further action for this SWMU at this time.

SWMU 5 Room 5097

Conclusions: Between 1980 and 1987, this unit was used to store solvent wastes. IEPA approved closure of this unit in 1987. This unit is currently used for less than 90-day storage of solvent wastes only. The potential for release to environmental media is low.

Recommendations: PRC recommends inspecting, sampling, and repairing floor cracks. PRC also recommends reapplying epoxy coating to the floor surface and determining if a distinct air permit is needed for the exhaust vent.

SWMU 6 Freon Stills

Conclusions: The facility began using freon stills in 1990. Currently one is out of service and one is operated in the facility. Freon is used as a degreaser, and dirty freon is distilled and reused. Still bottoms are collected in 55-gallon drums

RELEASED
DATE 7/18/80
RIN #
INITIALS WV

ENFORCEMENT
CONFIDENTIAL

and stored in Room 5097 (SWMU 5) prior to being disposed of off site. The potential for release to environmental media is low.

Recommendations: PRC recommends no further action for this SWMU at this time.

SWMU 7 Empty Drum Storage Area

Conclusions: This unit is maintained outdoors and upgradient from a storm water sewer that flows into the retention basin. Drums from raw material chemicals are rinsed in a continuous-flow washer for a few minutes. The rinsewater is treated in the WWTP located in Room 6409 (SWMU 1). The empty drums are then stored outdoors to be picked up by chemical distributors or manufacturers for reuse. The potential for release to environmental media is low.

Recommendations: PRC recommends no further action for this SWMU at this time.

SWMU 8 Satellite Accumulation Areas

Conclusions: These units have been active since the facility began operation. Either 5-gallon buckets or 55-gallon drums are used to accumulate wastes near their point of generation. These units are maintained indoors and can be located near all manufacturing areas and laboratories within the facility. The potential for release to environmental media is low.

Recommendations: PRC recommends no further action for this SWMU at this time.

AOC 1 Former Underground Storage Tank Location

Conclusions: Between 1971 and 1977, this tank was used to store a silicone-oil coolant. It was excavated in 1977; however, no samples were collected, the tank was not leak tested, and no documentation exists on whether the removal was approved by state or local authorities.

RELEASED
DATE 7/18/82
RIN #
INITIALS MV

ENFORCEMENT
CONFIDENTIAL

Recommendations: PRC recommends collecting subsurface soil samples to verify that no releases from the tank occurred.

RELEASED *W*
DATE 7/18/81
RIN # _____
INITIALS CVV

RELEASED

DATE

RIN #

INITIALS

7/18/80
MVENFORCEMENT
CONFIDENTIAL

TABLE 3

SWMU AND AOC SUMMARY

<u>SWMU</u>	<u>Dates of Operation</u>	<u>Evidence of Release</u>	<u>Recommended Further Action</u>
1. Wastewater Treatment Plant	1983 to 1987; 1990 to present	None	None
2. Room 6407	1983 to 1987	None	None
3. Room 6419	1988 to present	None	Apply new epoxy floor covering; obtain air permit if necessary
4. Room 5087	1983 to 1987	None	None
5. Room 5097	1980 to present RCRA-closed in 1987	None	Inspect, sample, and repair floor cracks; reapply epoxy floor covering; obtain air permit if necessary
6. Freon Stills	1990 to present	None	None
7. Empty Drum Storage Area	1987 to present	None	None
8. Satellite Accumulation Areas	1967 to present	None	None
<u>AOC</u>	<u>Dates of Operation</u>	<u>Evidence of Release</u>	<u>Recommended Further Action</u>
1. Former UST Location	1971 to 1977	None	Collect subsurface soil samples

REFERENCES

- Baxter and Woodman, Inc. (B&W), 1986. Letter from Bruce G. Mack, to Lawrence Eastep, Manager, Division of Land Pollution Control, Permit Section. December 22.
- B&W. 1987. "Hazardous Waste Storage Facility Closure Plan." Northrop Corporation, Defense Systems Division, Rolling Meadows, Illinois. July 14.
- Bogner, Jean E. 1976. *Geology for Planning in Northeastern Illinois*. Part V, Geology for Planning in Cook County, Illinois State Geological Survey. August 31.
- Federal Emergency Management Agency (FEMA). 1985. Flood Insurance Rate Map. City of Rolling Meadows, Illinois, Cook County. Community-Panel Number, 170155 0005 C. Revised June 19.
- Illinois Department of Public Health. 1967. "Well Construction Report." Geological Water Surveys Water Well Record. September.
- Illinois Environmental Protection Agency (IEPA). 1982. Violation Letter from Kenneth P. Bechely, Northern Region Manager, Division of Land Pollution Control, to James Nelson, Northrop Corporation. May 7.
- IEPA. 1985a. Application Denial Letter from Eugene P. Theios, Manager, Disposal Alternatives Unit, Permit Section, Division of Land Pollution Control. January 8.
- IEPA. 1985b. E. Theios, Internal Communication Regarding Northrop Corporation's Supplemental Waste Stream Permit. January 16.
- IEPA. 1985c. Water Pollution Control Permit No. 1985-EP-1804, Issued to Northrop Corporation, Defense Systems Division, for Metal Finishing Line 1. Issued January 17.
- IEPA. 1986a. Application Denial Letter from Lawrence W. Eastep, Manager, Permit Section, Division of Land Pollution Control to Lisa Riggle, Northrop. February 6.
- IEPA. 1986b. Water Pollution Control Permit No. 1986-EE-0077. Issued to Northrop Corporation, Defense Systems Division, for Industrial Pretreatment, Issued February 27.
- IEPA. 1986c. "RCRA Facility Inspection Report." Completed by Caroline Panico. December 19.
- IEPA. 1987a. Compliance Inquiry Letter from Harry A. Chappel, Acting Manager, Facilities Compliance Unit, Division of Land Pollution Control, to John Protheroe, Northrop. February 6.
- IEPA. 1987b. Closure Plan Approval Letter from Lawrence Eastep, Manager, Permit Section, Division of Land Pollution Control, to Northrop Corporation. March 9.

- IEPA. 1987c. RCRA Closure Denial Letter from Lawrence Eastep, Manager, Permit Section, Division of Land Pollution Control, to Northrop Corporation. August 18.
- IEPA. 1987d. Closure Approval Letter from Lawrence Eastep, Manager, Permit Section, Division of Land Pollution Control, to Robert Langlois, Northrop Corporation. December 21.
- IEPA. 1988. Compliance Inquiry Letter from Miles Zamco, Manager, Field Operations, Division of Air Pollution Control, to John Protheroe, Environmental Engineer, Northrop Corporation. July 21.
- IEPA. 1989. Compliance Inquiry Letter from Eugene P. Theios, Manager, Administrative Compliance Unit, Compliance Section, Division of Land Pollution Control, to Lisa Riggle, Northrop Corporation. March 23.
- IEPA. 1990a. Water Pollution Control Permit No. 1990-EN-4663, Issued to Northrop Corporation, Defense Systems Division, for Pretreatment of Metal Finishing Wastewater, Issued January 30.
- IEPA. 1990b. Air Operating Permit for Plating and Beryllium Deburring Operations. Issued to Northrop Corporation, I.D. No. 031815AAC. Issued on April 20.
- Illinois Pollution Control Board. 1990. Opinion and Order of the Board, PCB 89-192. March 22.
- IT Corporation. 1992. "Spill Prevention Control and Countermeasure Plan. "Northrop Corporation, Electronic Systems Division, Rolling Meadows, Illinois. January.
- Northrop Corporation (Northrop). 1980a. Notification of Hazardous Waste Activity Form. Submitted August 15.
- Northrop. 1980b. Hazardous Waste Permit Application. Submitted November 18.
- Northrop. 1982a. Response Letter from James L. Nelson to Kenneth P. Bechely, IEPA. May 24.
- Northrop. 1982b. Hazardous Waste Permit Application. Submitted December 14.
- Northrop. 1984a. Hazardous Waste Permit Application. Submitted March 15.
- Northrop. 1984b. Closure Plan, Document No. 099-006257. Effective April 4.
- Northrop. 1987a. Hazardous Waste Permit Application. Submitted January 6.
- Northrop. 1987b. Response Letter from R. Langlois, Director, Facilities/Administration, to Harry A. Chappel, Acting Manager, Facilities Compliance Unit, IEPA. February 16.
- Northrop. 1987c. RCRA Part A Permit Withdrawal Letter from Richard Ng, Manager, Safety and Industrial Hygiene, to Lawrence Eastep, Manager, Permit Section, Division of Land Pollution Control, IEPA. July 20.

- Northrop. 1987d. Response to IEPA Disapproval Letter from Robert Langlois, Director, Facilities/Administration, to Lawrence Eastep, Manager, Permit Section, Division of Land Pollution Control, IEPA. October 5.
- Northrop. 1989. Response to Compliance Inquiry Letter, from David A. Gurrie, Manager, Facilities Support Services, to Dana Curtiss, Administrative Compliance Unit, Compliance Section, IEPA. March 29.
- PRC Environmental Management, Inc. (PRC). 1993a. Record of Telephone Conversation Regarding General Information, between Jeff Swano, and Dave Gurrie, Northrop. June 9.
- PRC. 1993b. Record of Telephone Conversation Regarding Groundwater and Surface Water Uses, between Jeff Swano, and Orrin Helms, Water Foreman, Palatine Public Works, June 9.
- PRC. 1993c. Record of Telephone Conversation Regarding Groundwater and Surface Water Uses, between Jeff Swano, and John Somogyi, Water Production Supervisor, City of Rolling Meadows. June 9.
- PRC. 1993d. Record of Telephone Conversation Regarding Facility Operations, between Jeff Swano, and Ed Glod and David Gurrie, Northrop. July 1.
- PRC. 1994. Record of Telephone Conversation Regarding General Information, between Cathy Collins, and Dave Gurrie, Northrop. April 14.
- U.S. Department of Agriculture (USDA). 1979. Soil Survey of DuPage and Part of Cook Counties, Illinois. Soil Conservation Service.
- U.S. Department of Commerce (USDOC). 1963. *Rainfall Frequency Atlas of the United States*. Technical Paper No. 40. Government Printing Office, Washington, DC.
- USDOC. 1968. *Climatic Atlas of the United States*. Government Printing Office, Washington, DC.
- U.S. Department of the Interior (DOI). 1989. Endangered, Threatened, and Proposed Species to be Considered During Section 7 Consultations. March.
- U.S. Geological Survey (USGS). 1961. Palatine Quadrangle, Illinois, Cook County. 7.5 Minute Series Topographic Map. Photorevised 1972 and 1980.
- Warzyn Engineering, Inc. 1987. Log of Test Boring, Environmental Boundary Survey, 600 Hicks Road, Northrop,. March 11.

APPENDIX A
VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS
(11 Pages)

VISUAL SITE INSPECTION SUMMARY

Northrop Corporation, Electronics Systems Division
600 Hicks Road
Rolling Meadows, Illinois 60008
ILD 005 128 988

Date: May 21, 1993

Primary Facility Representative: David A. Gurrie

Representative Telephone No.: (708) 259-9600

Additional Facility Representatives: Edward F. Glod
Eric B. Howell
William A. Cameron

Inspection Team: Jeff Swano, PRC Environmental Management, Inc. (PRC)
Ron Baker, PRC

Photographer: Ron Baker

Weather Conditions: Sunny, calm, about 65 °F

Summary of Activities: The visual site inspection (VSI) began at 8:15 a.m. with an introductory meeting. The inspection team explained the purpose of the VSI and the agenda for the visit. Facility representatives then discussed the facility's past and current operations, solid wastes generated, and release history. Facility representatives provided the inspection team with copies of requested documents.

The VSI tour began at 12:00 p.m. outside of the facility by the Former Underground Storage Tank Location (AOC 1). The inspection team walked around the outside of the entire facility and observed the retention basin, the Empty Drum Storage Area (SWMU 7). The inspection team then went inside to observe the manufacturing processes and waste management practices. The inspection team observed the printed wire board (PWB) area and SAAs (SWMU 8). The team then entered Room 6409 and observed the WWTP (SWMU 1). The inspection team next entered Room 6407 (SWMU 2) and saw that raw material chemicals were being stored in this room. Next the inspection team entered Room 6419 (SWMU 3) and observed how corrosive wastes are handled. The inspection team entered assembly area and an engineering laboratory and saw more SAAs (SWMU 8). After obtaining security clearance, the team entered Room 5087

(SWMU 4) and observed testing of finished products. The inspection team entered a large assembly area and observed a Freon Still (SWMU 6). The team next entered Room 5097 (SWMU 5) and observed how solvent wastes are handled.

The tour concluded at 3:50 p.m., after which the inspection team held an exit meeting with facility representatives. The VSI was completed and the inspection team left the facility at 4:30 p.m.



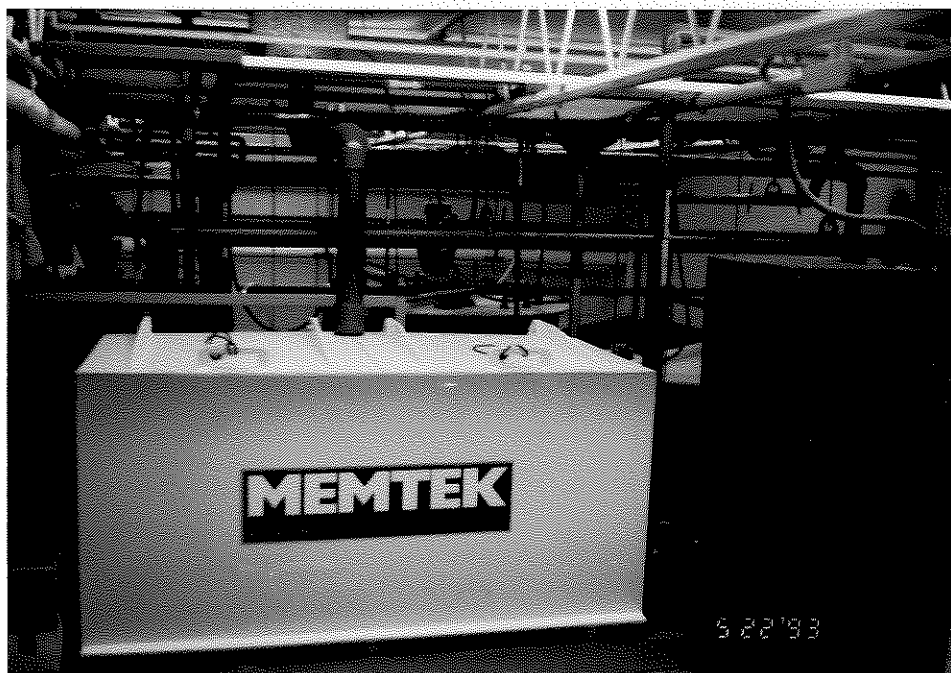
Photograph No. 1
 Orientation: Southeast
 Description: Partial perspective of the WWTP (SWMU 1).

Location: SWMU 1
 Date: 05/21/93



Photograph No. 2
 Orientation: West
 Description: Hopper containing photoresist solids generated in the WWTP (SWMU 1). The drum in the foreground contains photoresist solids.

Location: SWMU 1
 Date: 05/21/93



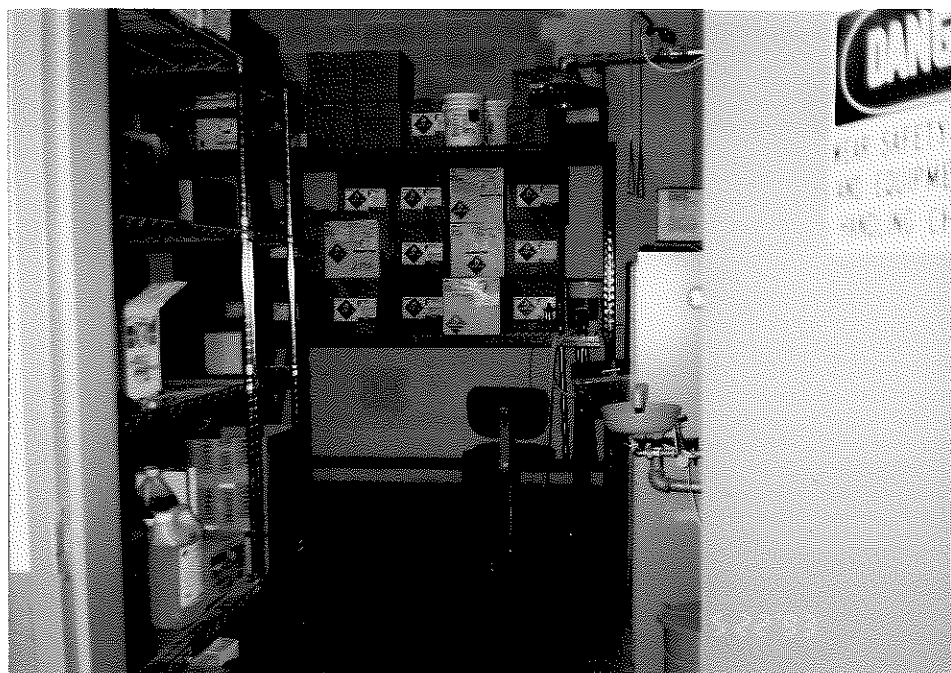
Photograph No. 3

Orientation: North

Location: SWMU 1

Date: 05/21/93

Description: Ionizing tank of the WWTP (SWMU 1) that regenerates copper sheeting.



Photograph No. 4

Orientation: East

Location: SWMU 2

Date: 05/21/93

Description: Room 6407 (SWMU 2) was formerly used as a hazardous waste storage room; it is currently used to store raw material chemicals.



Photograph No. 5

Orientation: East

Location: SWMU 3

Date: 05/21/93

Description: Room 6419 (SWMU 3) is the corrosives waste storage room. The northern half of floor is bermed; the southern half of floor is bare concrete; the ventilation hood is located to the left and marked with a caution sign.



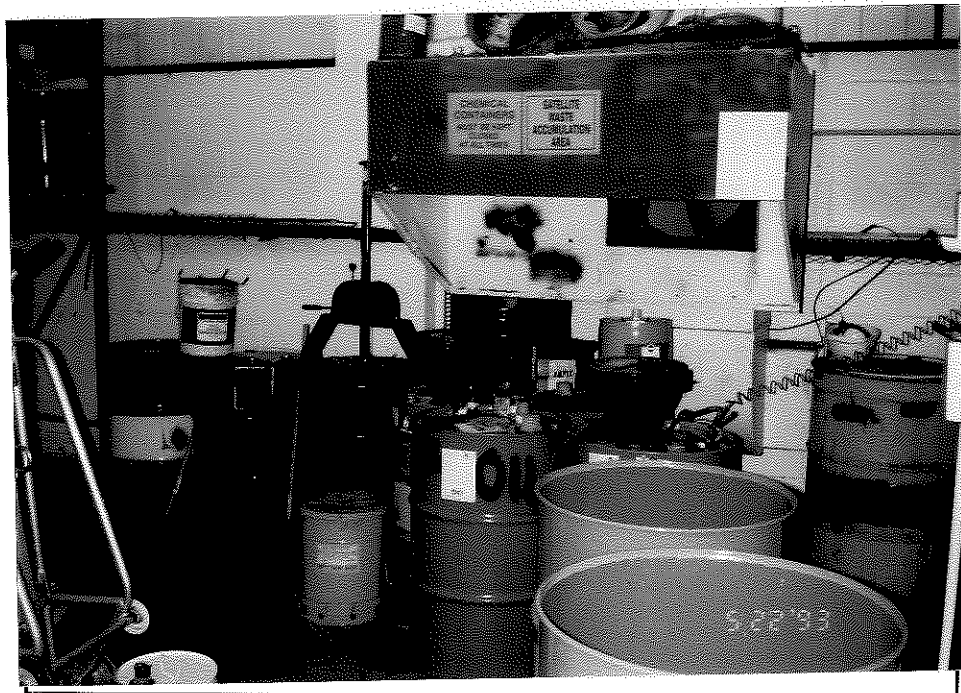
Photograph No. 6

Orientation: Southeast

Location: SWMU 4

Date: 05/21/93

Description: Room 5087 (SWMU 4) was formerly used to store hazardous waste. It is currently used to test finished products.



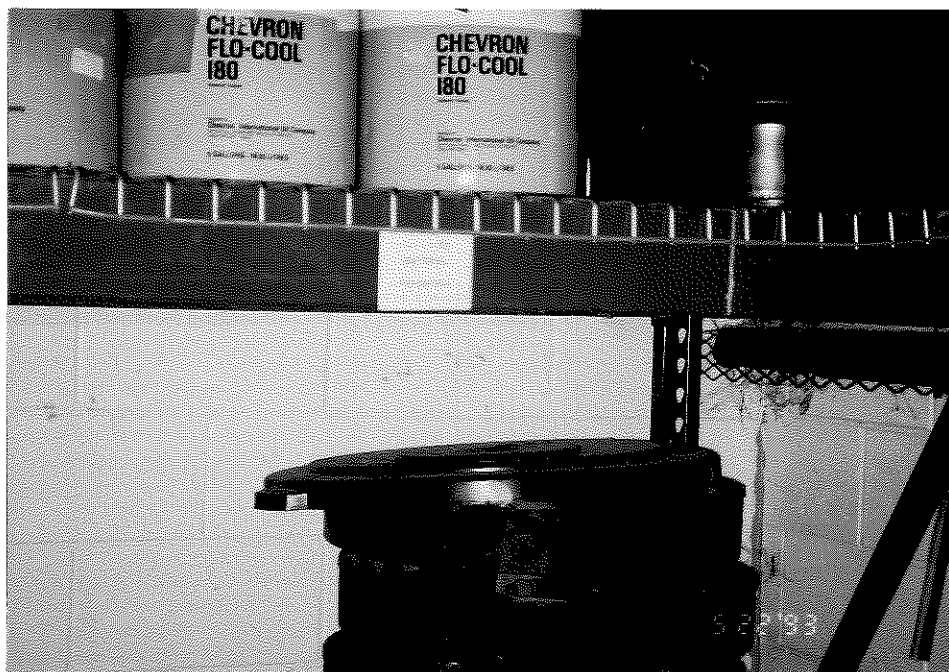
Photograph No. 7

Orientation: East

Location: SWMU 5

Date: 05/21/93

Description: Room 5097 (SWMU 5) is the solvent waste storage room. Note the ventilation hood. Also, note the eroding epoxy floor covering.



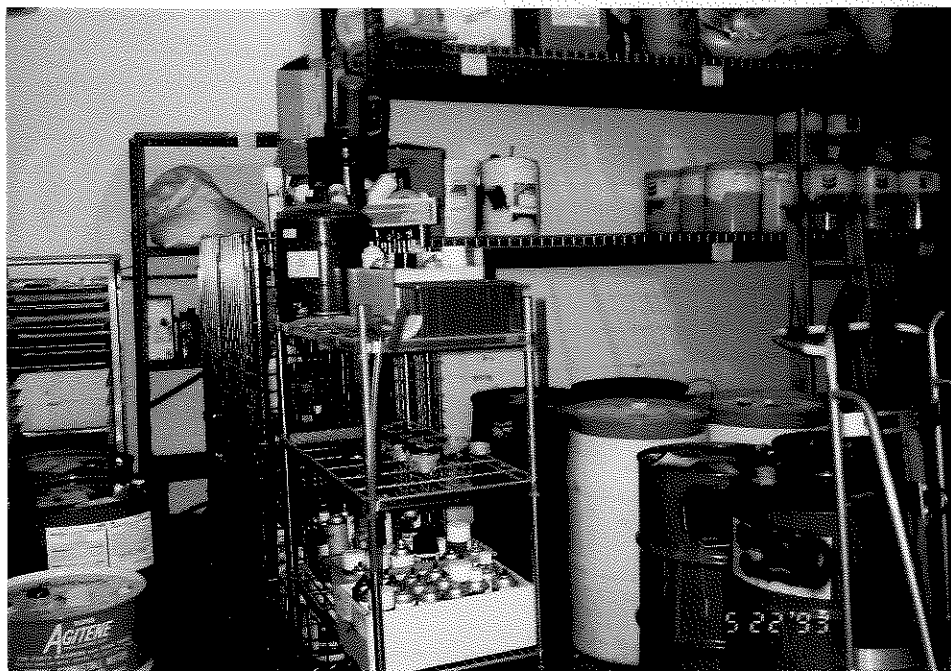
Photograph No. 8

Orientation: North

Location: SWMU 5

Date: 05/21/93

Description: Room 5097 (SWMU 5); expired chemicals storage shelf at north end of room. Sign on shelf reads "out dated material disposition to be determined".



Photograph No. 9

Orientation: North

Location: SWMU 5

Date: 05/21/93

Description: Room 5097 (SWMU 5); drum storage in north half of room. Note expired chemical storage on shelves in foreground and on back wall.



Photograph No. 10

Orientation: East

Location: SWMU 6

Date: 05/21/93

Description: Freon Still (SWMU 6); dark blue objects in the foreground and in the background are the Electrovert's degreaser and a freon still, respectively.



Photograph No. 11

Orientation: Northwest

Location: SWMU 7

Date: 05/21/93

Description: Empty 55-gallon plastic drums on west side of driveway in Empty Drum Storage Area (SWMU 7) awaiting pick-up.



Photograph No. 12

Orientation: Northeast

Location: SWMU 7

Date: 05/21/93

Description: Empty 55-gallon steel and plastic drums on east side of driveway in Empty Drum Storage Area (SWMU 7) awaiting pickup.



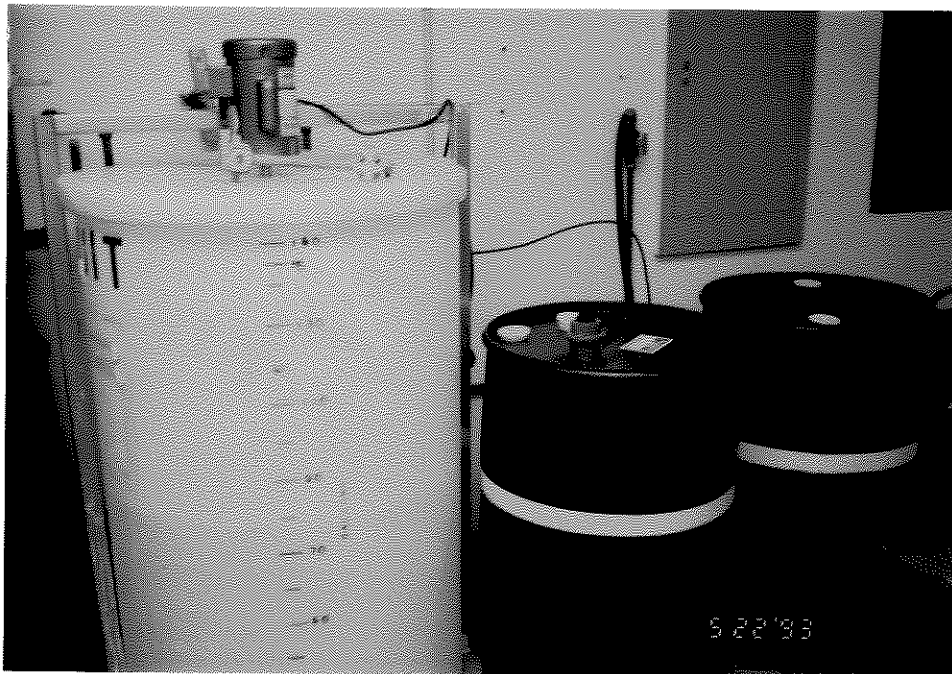
Photograph No. 13

Location: SWMU 8

Orientation: East

Date: 05/21/93

Description: Waste caustics (D002, D008) in a satellite accumulation area (SWMU 8) in PWB production area. Etched copper is drying on the table to the left.



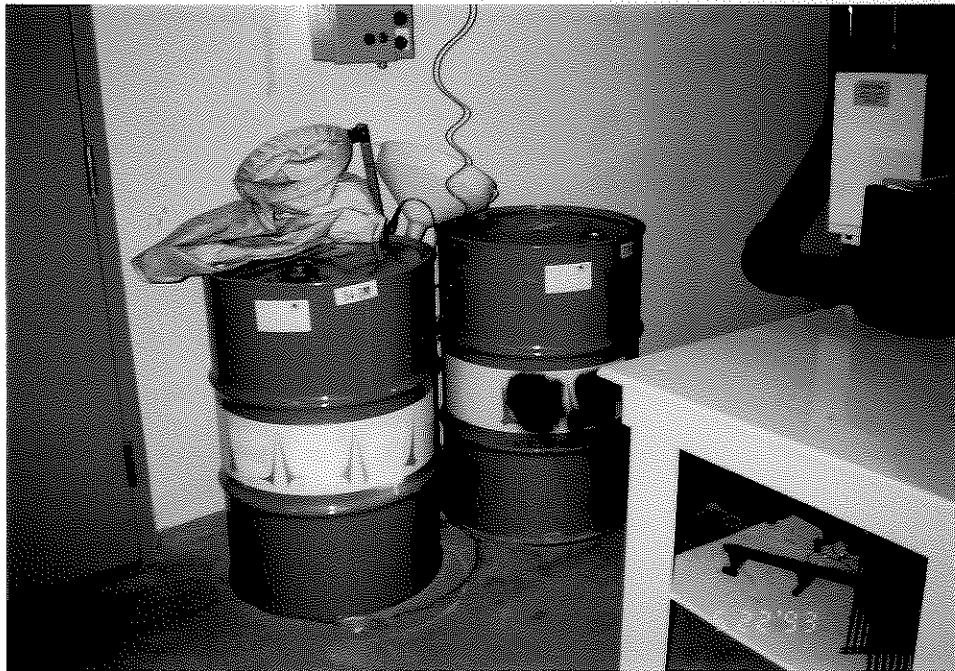
Photograph No. 14

Location: SWMU 8

Orientation: South

Date: 05/21/93

Description: Spent photodeveloper (D008) in SAA (SWMU 8).



Photograph No. 15
 Orientation: North
 Description: Spent freon (F001) in SAA (SWMU 8).

Location: SWMU 8
 Date: 05/21/93



Photograph No. 16
 Orientation: South
 Description: Spent solvents (F001, F002, F003, F005) in SAA (SWMU 8) in the MIC production area.

Location: SWMU 8
 Date: 05/21/93



Photograph No. 17

Location: SWMU 8

Orientation: South

Date: 05/21/93

Description: Solvent-contaminated rags (F005, D001, D035) in SAA (SWMU 8).



Photograph No. 18

Location: AOC 1

Orientation: North

Date: 05/21/93

Description: Former Underground Storage Tank Location (AOC 1); the tank was located beneath the bushes.

APPENDIX B
VISUAL SITE INSPECTION FIELD NOTES
(16 Pages)

(38)

0800

0810

0815

Check in at security desk.

Dave Garriv picks us up

Meet in conference room to

Start interview. Jeff

Describes why we are here
for this inspection.

Dave uses overheads to
give a presentation.

MOST manufacturing goes on
in 600 A Bldg.

Products built here are

prototypes, so very little

manufacturing goes on.

Manufacturing that does go

on is electronic circuit
boards.

Build electron tubes.

Finant 5/2/93

(39)

Chemical storage areas on
east side of 500 Bldg.

Dave finishes brief overview.

Ed now gives a presentation.

All chemicals that enter the
building are reviewed
prior to purchase. They look

at Health & Safety as well

as manufacturing concerns

Corporate is producing an
environmental manual.

H&S issues are well

thought out & looks like

a good program.

Northrop wants to do env.

Stewardship. Freon reduction

+ elimination program.

Finant 5/2/93

(40)

"Resisting" is stripping off an acrylic sheet off the copper sheeting. This is a alkaline liquid. No metal. Lower the pH and a powder-like substance comes out that is very plastic-like. This will not go through columns. It is sent offshore as a special waste by BFI to a landfill downstate operated by BFI. Gold plating tanks create small amounts. The solution is sent to a recycler once per year.

~~Stewart~~ 5/24/93

(41)

Prior to 1989, everything was drummed and sent to Wupp off site (also in tanks). So F006 was mislabeled -- it should not have been on Part A permit application. Dave mentions that Northrop has a waste min program. the largest defense contractor in Illinois. Northrop Corp. ESD. Rolling Meadows Site. Ownership is Northrop Corp, a publicly held Corp. Manufacturing \Rightarrow raw materials. Circuit cards; 5-gallon drums of chemicals is a large amount.

~~Stewart~~ 5/24/93

(42)

WWTP chemicals are bought in bags + 55 gallons. Acids + bases are bought in 55-gallon drums. Lubricants, epoxies, RTV (silicon sealers adhesive), solvents, alcohols, are all purchased in small < 5 gallon Flux, paints, thinners also. Circuit-board sealants.

0930 Bill Cameron arrives

Most "labs" in this facility are electronics testing - maybe some Flux, a little thinner, freon.

No rail line transportation

~~Swans 5/24/93~~

(43)

Wire/component preparation. Generates Flux, Thinner + Freon. There is a small container for waste 5-gallon, flammable storage of combustible containers. One filled it goes to bin 5097 for flammables. Transferred into 55-gallon drums. When full labeled + ready for shipment. Will notify Safety team for flammable pick up. Fuels recycling. They transport to Akron, IL Fuel blending at this location. Then sent to K.L.N.S. (S-K will do this). 5/24/93

Swans 5/24/93

(4)

SWMD Reminder Checklist:

- Date began operations
- Date ceased operating
- Construction materials
- Dimensions / capacity
- Past releases?
- Secondary Containment and other observations.

Northrop trips to keep wastes separated in different drums.

Printed Circuit Board Assembly.

Freon, Flux + thinner, Coatings (Humiseal, a clear polyurethane sealer). This goes to 5097. Additionally

Quam 5/21/93

(45)

1.1" trichloroethane from a Solder cleaning (finger cleaner). 5 gallon containers and accumulated in 55 gallons in 5097 room.

Power Supply assembly:

Building amplifiers (some circuit boards) that supply the power to the products.

It is also like a transformer.

Wastes are Freon, cleaning solvents, ~~meth~~ methylene chloride.

Note: Freon is cascaded when doing it goes to a bigger degreaser that has a still. Still bottoms go to 5097. This is how most Freon is handled.

Quam 5/21/93

(46)

Wipe rags come out of all Day Cans, picked up daily.

Rineco, Benton Arkansas,

grinds them and fuel blends.

Rineco used since 1993. Before

what generated by ENSCO.

& split off (Environmental Systems Company).

from El Dorado, Arkansas.

Since 1989.

Whenever Northrop chooses a waste handling or disposal facility, it is audited

prior to decision and annually.

Mostly a consultant will do

this for Northrop.

Prior to 1989, rags went to

LWD, Inc. of KY

for incineration.

Swant 5/2/93

(47)

Drill bottoms go to Sateray

Kleen who recycles the

materials. Dolton, IL

facility.

Coil Assembly.

Purchase wire from off site,

& coil it. Alcohols are

used for cleaning. Wipe

Rags are generated

Encapsulation

A silicone rubber is encapsulated

around power supplies; some

harnesses. Works as

insulation, heat sinks.

Any left over silicone is

Swant 5/2/93

(98)

Cured. Swept up off the floor into a waste bin for municipal waste landfilling. Some Rags.

Testing

Some rags. Tests the electronic components.

Printed wiring boards.

See notebook.

The majority of wastes go to WWTP. Some baths cannot be treated by the plant. They are stored in 55 gallon drums. These are stored in room 6419 (all corrosives come here)

Swano 5/21/93

(99)

Ammonia copper etching is reclaimed by the producer CP Inorganics, Inc.

Joliet, IL

At ferric chloride

hydrochloric acid. goes

to Clean Harbors of Chicago.

Trailer truck takes drums.

Treating waters.

Tin/lead stripper solution

of hydrogen peroxide sodium

bifluoride. Goes to clean Harbors

Same as above.

Before WWTP everything was

bulked; 1 tanker per week.

Pumped out of drums stored

in one room. Enviroite, Inc.

Swano 5/21/93

(30)

Gold plating bath every
3-5 years 55 gallon drum
goes ACR, Inc. in IL.
(Suburban Chicago).

Electron Tubes.

A separate product.
One plating area. The
Solutions are collected in
5 gal drums and accumulated
in room 6419.

Nickle-plating solution. To
Clean Harbors.

Acid Brise dip nitric
phosphoric acid. Same as
above.

Same from 111 tri goes
to 5097.

Swan 5/21/93

(51)

Silver cyanide plating bath.
A copper cyanide plating
bath. 55 gallons each
once every ~3-years.
Goes to ~~Cyanotech~~ 5/21/93
Cyano Kem. of
Detroit,
MI.

Also generates Rags, Freon,
111 tri (ICE) This is the
biggest user of TCE. Goes
to room 5097.

M/C Hybrid Circuits
Building tiny chips. Wastes
include degreasing solution
Rags, acetone, some toluene,

Swan 5/21/93

(50)

all goes to room 5097,

Engineering generates very small amounts of all chemicals used in throughout the facility. All wastes go to rm 5097.

Developer from photographers out as a byline to Clean Harbors. To room 6419.

→ 55 gallon drums.

Building maintenance

Sends oils, rags, solvents, paint

ALL to Rm 5097.

~~Duane 5/21/93~~

(51)

Reliability Lab generates chromic acid. bulked in Room 6419 & to Clean Harbors. Also has nitric acid, bulked in 6419 with other acids to Clean Harbors.

Many chemicals pass their expiration (shelf life) dates.

Once expired goes to room

5097. They try to

find non-gest (DOD) product mfg uses of it. Stored

in room 5097, but it

is not waste yet because

they are looking for other

~~Duane 5/21/93~~

(54)

users. Even tho its
expired it is not a waste
yet.

Room 5057 now storage
6409 is now WWT P.
6407 Chemical storage
area

No wells for closure. Wipe
+ Core samples.

Some groundwater sampling
around 1987 after closure
Some wells installed
around perimeter in order
to precautionary at what

Shaw. 5/21/93

(55)

Might be coming from
neighboring properties.
No records exist.

One UST removed in 1977.
Contained silicone oil,
a coolant from earlier
systems (B-52 bombers)

One underground diesel fuel
LINE from an above-ground
tank. No other tanks

Nothing currently comes over
as waste from other
Northrop facilities

Air permits (bubbled); about
8.

Shaw 5/21/93

(56)

Air permit violation of 1990. IEPA sent

NESHAP activities info. IEPA reviewed the info provided by Northrop.

A laser trimmer trims off ink on the beryllium oxide. A vacuum cleaner

takes the waste. IEPA said to get the trimmer permitted.

Abrasive cleaner was cleaning BEO ceramics with a gripper blaster.

(Degreaser doesn't work well enough) to clean the material. It was not

~~Stevens 5/21/93~~

(57)

removing any BEO. IEPA wanted this

permitted as an air source 9/50. Northrop scientifically figured out the emissions. IEPA

didn't like the data. wanted new data within 90 days. Didn't make the

deadline & got \$10,000 fine.

Northrop Corp owns property

Spill reported in 1992 not necessary to report. A plating bath spilled contained

Stevens 5/21/93

(58)

lead & cleaned up indoors. Legal Counsel later decided it wasn't necessary.

Shen on Detention basin.
(Spring 1992) Found source to be from kerosene wiped on Snow-removal equipment from a contractor.

Detention basin collects all storm water collected from the entire property.

~ acres.

~~Quinn 5/2/93~~

(59)

A NPDES permit was filed in mid-1980s (1986) filed because all permits were filed at same time.

1120 Interview ends at 1120

PRC will take photographs & will hand over the film to Northrop. Northrop will develop film, review it for secrecy problems and send PRC 3 copies of all old photos. PRC will get negatives only if all photos are old. And we will get negatives only of the old photos

Quinn 5/21/93

(62)

1130 Break for lunch

1200 End lunch begin walkaround.

1215 Observe former use area.

No observations
Mostly light manufacturing + some transportation companies around the facility.

1232 Shipping area has floor drains outside parallel to Dock
Drains are connected to Storm Water sewers

1245 See empty DSA outside doors.

~~August 5/21/93~~

(61)

Seg requested by who will pickel
up by distributors for
mfrs.

No secondary containment
On asphalt that slopes
North. Some spilled or
stained asphalt north
of current drains.
Storm sewer North of it.
All lab sinks in PUB

go to WWTP
Observe plating lines.
All covers here go to
WWTP. A drum accumulates
9226, a finishing solution
(corrosive)

Empty barrels are flow washed

~~August 5/21/93~~

(62)

for several minutes.
Enter waste area
MEMTEK manufactured the
WWTTP

Filters are ^{air} dried and drained
Go to 6419.

Observed drums being stored
at the north end of
the WWTTP (see photo 13).
This is here until it is handled
Burned floors.

1355 Enter Closed Room 6407.
Some waste storage.
Low materials now stored

Swann 5/21/93

(63)

here; Freeze & all flammables
Some staining on the floor.
A blow-off roof. Burned
doorway. Some cracks
in middle of the floor.
a grey epoxy paint on
the floor has been eroding
away.

Room 6419, Corrosive
Waste Storage. Area on
north side of room has
been burned

of 1200s
34 55 gallon drums that
are full & with labels. All cylinders
2 55 gal drums at piping
filters. 8 55 gal drums
of non-regulated drums.

Swann 5/21/93

(66)

1520 Room 5097. Stairs on floors
No floor drains. Under a filled
hood are drums being filled
5 drums of haz waste
w/ Freon. Humiseal.
Also 6 drums of non-haz
for non-regulated waste
Under hood 4 drums
1 5 gallon pail. Vol.
Humiseal, Kester 5235
(in a 5 gallon). Paint is
in a 5 gallon bucket.
Another non-haz waste
lots of "out dated"
materials on shelves.

~~Swain 5/21/93~~

(67)

Spill control material
is on shelves.
Hood vents straight out
of doors.
Door is hinged -
across the room is
lower than the rest of
the building
Good signage: Everything
is grounded!
Blow off windows.
Drums are wheeled out
of the room to a dock
~ 60 feet away
Stairs is LQG

Swain 5/21/93

(68)

1550

End walk through
Go to office and look to
see if they filed a notification
of Hazardous Waste Activity
Report after Closure. It
appears they did not.

Sewer sewers discharge
into Silt Creek.

Detention pond sets
parking lot and roof
rain runoff.

1605 Begin debriefing meeting.

1620 PRC hands over the
roll of film to Ed

Glog.

1630 Depart Northrop

Forrester 3/24/93

APPENDIX C
SOIL AND GROUNDWATER ANALYTICAL RESULTS
(10 Pages)

CARZYN ENGINEERING
 TITLE ORGANIC COMPOUND RESULTS
 PROJECT: NORTHROP BOUNDARY SURVEY
 LOCATION: CHICAGO, ILLINOIS
 CH: 60222.00

CK'D: KAW APP'D: CAW
 DATE ISSUED: 4-9-87

COMPOUND	REPORTABLE DETECTION LIMIT (UG/KG)	14851 14852 14853		
		B2-1	P1-1	B1-3
		03/06/87	03/06/87	03/06/87
=====	=====	=====	=====	=====
BENZENE	50	X	X	X
BROMODICHLOROMETHANE	50	X	X	X
BROMOFORM	100	X	X	X
CARBON TETRACHLORIDE	50	X	X	X
CHLOROBENZENE	50	X	X	X
CHLORODIBROMOMETHANE	50	X	X	X
CHLOROETHANE	50	X	X	X
CHLOROETHYLVINYL ETHER	1000	X	X	X
CHLOROFORM	50	X	X	X
1,2-DICHLOROBENZENE	250	X	X	X
1,3-DICHLOROBENZENE	250	X	X	X
1,4-DICHLOROBENZENE	250	X	X	X
1,1-DICHLOROETHANE	50	X	X	X
1,2-DICHLOROETHANE	50	X	X	X
1,1-DICHLOROETHENE	50	X	X	X
1,2-DICHLOROETHENE	50	X	X	X
1,3-DICHLOROPROPENE	50	X	X	X
1,3-DICHLOROPROPENE	50	X	X	X
1,2-DICHLOROPROPANE	50	X	X	X
ETHYLBENZENE	50	X	X	X
ETHYL BROMIDE	100	X	X	X
ETHYL CHLORIDE	50	X	X	X
METHYLENE CHLORIDE	1000	X	X	X
1,1,2,2-TETRACHLOROETHANE	50	X	X	X
TETRACHLOROETHENE	50	X	X	X
TOLUENE	50	X	X	X
1,1-TRICHLOROETHANE	50	X	X	X
1,2-TRICHLOROETHANE	50	X	X	X
TRICHLOROETHENE	50	X	X	X
VINYL CHLORIDE	50	X	X	X
YLENES	50	X	X	X

X = ANALYZED, BUT NOT DETECTED.

MDL = DETECTED, BUT LESS THAN REPORTABLE DETECTION LIMIT.

JARZYN ENGINEERING
 VOLATILE ORGANIC COMPOUND RESULTS
 SUBJECT: NORTHROP BOUNDARY SURVEY
 LOCATION: CHICAGO, ILLINOIS
 ID: 60222.00

CK'D: KAW APP'D: CAW
 DATE ISSUED: 4-9-87

COMPOUND	REPORTABLE DETECTION LIMIT (UG/KG)	14924	14925	14927	14928
		B3-1 03/09/87	B4-2 03/10/87	B5-1 03/10/87	B6-1 03/10/87
BENZENE	50	X	X	X	X
BROMODICHLOROMETHANE	50	X	X	X	X
BROMOFORM	100	X	X	X	X
CARBON TETRACHLORIDE	50	X	X	X	X
CHLOROBENZENE	50	X	X	X	X
CHLORODIBROMOMETHANE	50	X	X	X	X
CHLOROETHANE	50	X	X	X	X
1,2-CHLOROETHYLVINYL ETHER	1000	X	X	X	X
CHLOROFORM	50	X	X	X	X
1,2-DICHLOROBENZENE	250	X	X	X	X
1,3-DICHLOROBENZENE	250	X	X	X	X
1,4-DICHLOROBENZENE	250	X	X	X	X
1,1-DICHLOROETHANE	50	X	X	X	X
1,2-DICHLOROETHANE	50	X	X	X	X
1,1-DICHLOROETHENE	50	X	X	X	X
1,2-DICHLOROETHENE	50	X	X	X	X
1,3-DICHLOROPROPENE	50	X	X	X	X
1,3-DICHLOROPROPENE	50	X	X	X	X
1,2-DICHLOROPROPANE	50	X	X	X	X
ETHYLBENZENE	50	X	X	X	X
METHYL BROMIDE	100	X	X	X	X
METHYL CHLORIDE	50	X	X	X	X
METHYLENE CHLORIDE	1000	X	X	X	X
1,1,2,2-TETRACHLOROETHANE	50	X	X	X	X
TETRACHLOROETHENE	50	X	X	X	X
TOLUENE	50	X	X	X	X
1,1,1-TRICHLOROETHANE	50	X	X	X	X
1,1,2-TRICHLOROETHANE	50	X	X	X	X
TRICHLOROETHENE	50	X	X	X	X
VINYL CHLORIDE	50	X	X	X	X
YLENES	50	X	X	X	X

X = ANALYZED, BUT NOT DETECTED.

MDL = DETECTED, BUT LESS THAN REPORTABLE DETECTION LIMIT.

WARZYN ENGINEERING
 VOLATILE ORGANIC COMPOUND RESULTS
 PROJECT: NORTHROP BOUNDARY SURVEY
 LOCATION: CHICAGO, ILLINOIS
 CH#: 60222.00

CK'D: KAW APP'D: CAW
 DATE ISSUED: 4-9-83

COMPOUND	REPORTABLE DETECTION LIMIT (UG/KG)	14929	14932	14933	14934
		B6-1 DUP 03/10/87	P11-1 03/11/87	P7-1 03/11/87	P4-1 03/11/87
BENZENE	50	X	X	X	X
BROMODICHLOROMETHANE	50	X	X	X	X
BROMOFORM	100	X	X	X	X
CARBON TETRACHLORIDE	50	X	X	X	X
CHLOROBENZENE	50	X	X	X	X
CHLORODIBROMOMETHANE	50	X	X	X	X
CHLOROETHANE	50	X	X	X	X
1,2-CHLOROETHYLVINYL ETHER	1000	X	X	X	X
CHLOROFORM	50	X	X	X	X
1,1,2-DICHLOROBENZENE	250	X	X	X	X
1,3-DICHLOROBENZENE	250	X	X	X	X
1,4-DICHLOROBENZENE	250	X	X	X	X
1,1-DICHLOROETHANE	50	X	X	X	X
1,2-DICHLOROETHANE	50	X	X	X	X
1,1-DICHLOROETHENE	50	X	X	X	X
1,2-DICHLOROETHENE	50	X	X	X	X
1,3-DICHLOROPROPENE	50	X	X	X	X
1,3-DICHLOROPROPENE	50	X	X	X	X
1,2-DICHLOROPROPANE	50	X	X	X	X
ETHYLBENZENE	50	X	X	X	X
METHYL BROMIDE	100	X	X	X	X
METHYL CHLORIDE	50	X	X	X	X
METHYLENE CHLORIDE	1000	X	X	X	X
1,1,2,2-TETRACHLOROETHANE	50	X	X	X	X
TETRACHLOROETHENE	50	X	X	X	X
TOLUENE	50	X	X	X	X
1,1,1-TRICHLOROETHANE	50	X	X	X	X
1,1,2-TRICHLOROETHANE	50	X	X	X	X
TRICHLOROETHENE	50	X	X	X	X
VINYL CHLORIDE	50	X	X	X	X
XYLENES	50	X	X	BMOL	X

X = ANALYZED, BUT NOT DETECTED.

BMOL = DETECTED, BUT LESS THAN REPORTABLE DETECTION LIMIT.

SOIL COMPOSITES

page 4

WARZYN ENGINEERING
ANALYTICAL LABORATORY RESULTS

PROJECT: WARZYN ENGINEERING INC.
NORTHROP BOUNDARY SURVEY
LOCATION: CHICAGO, ILLINOIS

CH: 60222.00
DATE SAMPLED: SEE BELOW
CK'D: KAN APP'D: CAW
DATE ISSUED: 4-9-87

LAB #	14930	14931
SAMPLE DESCRIPTION	SOUTH BOUNDARY	EAST BOUNDARY
DATE SAMPLED	03/10/87	03/09/87
=====	=====	=====
ARSENIC	1.92	1.83
BARIUM	<200	<200
CHROMIUM	<20.0	22.8
CADMIUM	<4.00	<4.00
LEAD	<60.0	<60.0
MERCURY	<0.103	<0.084
SELENIUM	<0.50	<0.50
SILVER	<10.0	<10.0

RESULTS ARE REPORTED IN MG/KG DRY WEIGHT BASIS.

SOIL COMPOSITES

page 5

WARZYN ENGINEERING
ANALYTICAL LABORATORY RESULTS

PROJECT: WARZYN ENGINEERING INC.
NORTHROP BOUNDARY SURVEY
LOCATION: CHICAGO, ILLINOIS

CH: 60222.00
DATE SAMPLED: 03/06/87
CK'D: KAW APP'D: CAW
DATE ISSUED: 4-14-87 RE-ISSUED

LAB #	14850
SAMPLE DESCRIPTION	NORTH BOUNDARY
=====	=====
ARSENIC	1.68
BARIUM	<200
CADMIUM	<4.00
CHROMIUM	46.5
LEAD	69.7
MERCURY	<0.101
SELENIUM	<0.500
SILVER	<10.0

RESULTS ARE REPORTED IN MG/KG DRY WEIGHT BASIS.



HAZLETON

LABORATORIES AMERICA, INC.

page 5
Chemical & BioMedical Sciences Division

3301 KINSMAN BLVD. • P.O. BOX 7545 • MADISON, WISCONSIN 53707 • PHONE (608) 241-4471 • TLX 703956 HAZRAL M. 10

REPORT OF ANALYSIS

SOIL SAMPLE

WHEELWOOD
RAYN ENGINEERING, INC.
SCIENCE COURT
UNIVERSITY RESEARCH PARK
MADISON, WI 53705

SAMPLE NUMBER: 7010221

DATE ENTERED: 03/12/87

REPORT PRINTED: 03/17/87

14926 84-1

INVOICE ORDER NUMBER: 60222.00-3/12/87

FORMALDEHYDE

LESS THAN 10.0 PPM

METHOD REFERENCE

OSHA P & CAM 125 WITH MODIFICATIONS PER HAZLETON LABORATORY WORKSHEET
EXX NUMBER 5016.

GOOD REFERENCES

SPECIAL ANALYSIS: ASSAY NAME AND METHOD LISTED ABOVE WITH RESULTS

GROUNDWATER SAMPLES

page 7

WYN ENGINEERING
 VOLATILE ORGANIC COMPOUND RESULTS
 PROJECT: NORTHROP BOUNDARY SURVEY
 LOCATION: CHICAGO, ILLINOIS
 CH: 60222.00

CK'D: KAW APP'D: CAW
 DATE ISSUED: 4-9-87

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L)	15264	15265	15266	15267
		B1 03/26/87	B2 03/26/87	B3 03/26/87	B4 03/26/87
BENZENE	1.0	X	X	X	X
BROMODICHLOROMETHANE	1.0	X	X	X	X
BROMOFORM	2.0	X	3.6	X	X
CARBON TETRACHLORIDE	1.0	X	X	X	X
CHLOROBENZENE	1.0	X	X	X	X
CHLORODIBROMOMETHANE	1.0	X	X	X	X
CHLOROETHANE	1.0	X	X	X	X
CHLOROETHYLVINYL ETHER	20	X	X	X	X
CHLOROFORM	1.0	X	X	X	X
1,2-DICHLOROBENZENE	5.0	X	X	X	X
1,3-DICHLOROBENZENE	5.0	X	X	X	X
1,4-DICHLOROBENZENE	5.0	X	X	X	X
1,1-DICHLOROETHANE	1.0	X	X	X	X
1,2-DICHLOROETHANE	1.0	X	X	X	X
1,1-DICHLOROETHENE	1.0	X	X	X	X
1,2-DICHLOROETHENE	1.0	X	X	X	X
1,3-DICHLOROPROPENE	1.0	X	X	X	X
1,1,3-DICHLOROPROPENE	1.0	X	X	X	X
1,2-DICHLOROPROPANE	1.0	X	X	X	X
ETHYLBENZENE	1.0	X	X	X	X
METHYL BROMIDE	2.0	X	X	X	X
METHYL CHLORIDE	1.0	X	X	X	X
METHYLENE CHLORIDE	1.0	X	X	X	X
1,1,2,2-TETRACHLOROETHANE	1.0	X	X	X	X
TETRACHLOROETHENE	1.0	X	X	X	X
TOLUENE	1.0	X	X	BMDL	X
1,1,1-TRICHLOROETHANE	1.0	X	X	X	X
1,1,1,2-TRICHLOROETHANE	1.0	X	X	X	X
TRICHLOROETHENE	1.0	X	X	X	X
VINYL CHLORIDE	1.0	X	X	X	X
XYLENES	1.0	X	X	X	X

X = ANALYZED, BUT NOT DETECTED.

BMDL = DETECTED, BUT LESS THAN REPORTABLE DETECTION LIMIT.

GROUNDWATER SAMPLES

page 8

LYN ENGINEERING
VOLATILE ORGANIC COMPOUND RESULTS
PROJECT: NORTHROP BOUNDARY SURVEY
LOCATION: CHICAGO, ILLINOIS
ID#: 60222.00

CK'D: LAW APP'D: CAW
DATE ISSUED: 4-9-87

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L)	15268 B5 03/26/87	15269 B6 03/26/87	15270 EQUIPMENT BLANK 03/26/87	15271 TRIP BLANK 03/26/87	15272 B1 FIELD DUP 03/26/87
BENZENE	1.0	X	X	X	X	X
BROMODICHLOROMETHANE	1.0	X	X	X	X	X
BROMOFORM	2.0	X	X	X	X	X
CARBON TETRACHLORIDE	1.0	X	X	X	X	X
CHLOROBENZENE	1.0	X	X	X	X	X
CHLORODIBROMOMETHANE	1.0	X	X	X	X	X
CHLOROETHANE	1.0	X	X	X	X	X
2-CHLOROETHYLVINYL ETHER	20	X	X	X	X	X
CHLOROFORM	1.0	X	X	X	X	X
1,2-DICHLOROBENZENE	5.0	X	X	X	X	X
1,3-DICHLOROBENZENE	5.0	X	X	X	X	X
1,4-DICHLOROBENZENE	5.0	X	X	X	X	X
1,1-DICHLOROETHANE	1.0	X	X	X	X	X
1,2-DICHLOROETHANE	1.0	X	X	X	X	X
1,1-DICHLOROETHENE	1.0	X	X	X	X	X
1,2-DICHLOROETHENE	1.0	X	X	X	X	X
1,3-DICHLOROPROPENE	1.0	X	X	X	X	X
C-1,3-DICHLOROPROPENE	1.0	X	X	X	X	X
1,2-DICHLOROPROPANE	1.0	X	X	X	X	X
ETHYLBENZENE	1.0	X	X	X	X	X
METHYL BROMIDE	2.0	X	X	X	X	X
METHYL CHLORIDE	1.0	X	X	X	X	X
METHYLENE CHLORIDE	1.0	X	X	X	X	X
1,1,2,2-TETRACHLOROETHANE	1.0	X	X	X	X	X
TETRACHLOROETHENE	1.0	X	X	X	X	X
TOLUENE	1.0	BMDL	X	2.0	2.0	X
1,1,1-TRICHLOROETHANE	1.0	X	X	X	X	X
1,1,2-TRICHLOROETHANE	1.0	X	X	X	X	X
TRICHLOROETHENE	1.0	X	X	X	X	X
VINYL CHLORIDE	1.0	X	X	X	X	X
XYLENES	1.0	X	X	X	X	X

= ANALYZED, BUT NOT DETECTED.

BMDL = DETECTED, BUT LESS THAN REPORTABLE DETECTION LIMIT.

WARZYN ENGINEERING
ANALYTICAL LABORATORY RESULTS

PROJECT: WARZYN ENGINEERING INC.
NORTHROP BOUNDARY SURVEY
LOCATION: CHICAGO, ILLINOIS

CH: 60222.00
DATE SAMPLED: 03/26/87
CK'D: KAW APP'D: KAW
DATE ISSUED: 4-9-87

LAB #	SAMPLE DESCRIPTION	CALCIUM	CHLORIDE
=====	=====	=====	=====
15273	B3	189	395

RESULTS ARE REPORTED IN MG/L.

REPORT OF ANALYSIS

WATER SAMPLE

page 10

AN ELWOOD
LARZYN ENGINEERING, INC.
SCIENCE COURT
UNIVERSITY RESEARCH PARK
MADISON, WI 53705

SAMPLE NUMBER: 7030526

DATE ENTERED: 03/27/8

REPORT PRINTED: 04/06/8

TER: WEI # 15267; B4

CHASE ORDER NUMBER: 60222-00-3/27/87

ORMALDEHYDE BY CHROMOTROPIC ACID

LESS THAN 5

PPM

METHOD REFERENCE

OSH P&CAM 125.

METHOD REFERENCES

SPECIAL ANALYSIS: ASSAY NAME AND METHOD LISTED ABOVE WITH RESULTS

APPENDIX D
SOIL BORING LOG
(1 Page)



LOG OF TEST BORING

Project Environmental Boundary Survey

600 Hicks Road - Northrop

Location Rolling Meadows, Illinois

Boring No. P-9

Surface Elevation _____

Job No. 60222

Sheet 1 of 1

WARZYN ENGINEERING INC. • ONE SCIENCE COURT • UNIVERSITY RESEARCH PARK • P.O. BOX 5385 • MADISON, WISCONSIN 53705

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
Recovery		Moisture		Depth		q _s	W	LL	PL	D
Type	↓	↓	N							
					Mottled Yellow Brown with Dark Brown to Black Clayey SAND, Some Fine and Coarse Gravel (SC)					
				2	Black Silty CLAY, Trace Fine Sand (CL)					
				4	Strong Fuel Oil Odor					
				6	Mottled, Light Gray with Yellow Olive Brown Clayey SILT, Trace Fine to Coarse Sand and Fine Gravel (ML)					
				8						
				10	End Probe at 8.5'					
					Probe backfilled immediately with cuttings.					
				12						
				14						
				16						

WATER LEVEL OBSERVATIONS

Dry

White Drilling _____

Upon Completion of Drilling _____

Time After Drilling _____

Depth to Water _____

Depth to Cave In _____

GENERAL NOTES

Start 3/11/87 Complete 3/11/87

Crew Chief SYL Rig CME 55

Drilling Method 4"OD FA



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD

CHICAGO, IL 60604-3590

RECEIVED MAY 17 1993
WMD RCRA
RECORD CENTER *Compliance*

REPLY TO THE ATTENTION OF:

HRE-8J

May 13, 1993

David A. Gurrie
Manager, Environmental and Safety Compliance
Northrop Corporation
600 Hicks Road
Rolling Meadows, IL 60008-1098

Re: Visual Site Inspection
Northrop Corporation
Electronic Systems Division
Rolling Meadows, IL
ID No. ILD 005 128 988

Dear Mr. Gurrie:

The United States Environmental Protection Agency (U.S. EPA) Region V will conduct a Preliminary Assessment and a Visual Site Inspection (PA/VSI) at the referenced facility. This inspection is conducted pursuant to the Resource Conservation and Recovery Act, as amended (RCRA) Section 3007 and the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (CERCLA) Section 104(e). The referenced facility has generated, treated, stored, or disposed of hazardous waste subject to RCRA. The PA/VSI requires identification and systematic review of all solid waste streams at the facility. The objective of the PA/VSI is to determine whether or not releases of hazardous wastes or hazardous constituents have occurred or are occurring at the facility which may require further investigation. This analysis will also provide information to establish priorities for addressing any confirmed releases.

The visual site inspection of your facility is to verify the location of all solid waste management units (SWMUs) and areas of concern (AOCs) and to make a cursory determination of their condition by visual observation. The definitions of SWMUs and AOCs are included in Attachment I. The VSI supplements and updates data gathered during a preliminary file review. During this site inspection, no samples will be taken. A sampling visit to ascertain if releases of hazardous waste or constituents have occurred may be required at a later date.

Assistance of some of your personnel may be required in reviewing solid waste flow(s) or previous disposal practices. The site inspection is to provide a technical understanding of the present and past

David A. Gurrie
May 13, 1993
Page 2

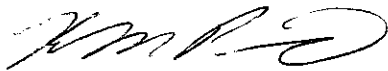
waste flows and handling, treatment, storage, and disposal practices. Photographs of the facility are necessary to document the condition of the units at the facility and the waste management practices used.

The VSI has been scheduled for Friday, May 21, 1993 at 8:00 a.m. The inspection team will consist of Jeff Swano and Shin Ahn of PRC Environmental Management, Inc., a contractor for the U.S. EPA. Representatives of the Illinois Environmental Protection Agency (IEPA) may also be present. Your cooperation in admitting and assisting them while on site is appreciated.

The U.S. EPA recommends that personnel who are familiar with present and past manufacturing and waste management activities be available during the VSI. Access to any relevant maps, diagrams, hydrogeologic reports, environmental assessment reports, sampling data sheets, environmental permits (air, NPDES), manifests and/or correspondence is also necessary, as such information is needed to complete the PA/VSI.

If you have any questions, please contact me at (312) 886-4448 or Francene Harris at (312) 886-2884. A copy of the Preliminary Assessment/Visual Site Inspection Report, excluding the conclusions and Executive Summary portion will be sent when the report is available.

Sincerely yours,



Kevin M. Pierard, Chief
OH/MN Technical Enforcement Section

Enclosure

cc: Bill Ingersoll, IEPA
Larry Eastep, IEPA

ATTACHMENT I

The definitions of solid waste management unit (SWMU) and area of concern (AOC) are as follows.

A SWMU is defined as any discernable unit where solid wastes have been placed at any time from which hazardous constituents might migrate, regardless of whether the unit was intended for the management of a solid or hazardous waste.

The SWMU definition includes the following:

- ~~RCRA regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells~~
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that U.S. Environmental Protection Agency has generally exempted from standards applicable to hazardous waste management units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents, such as wood preservative treatment dripping areas, loading or unloading areas, or solvent washing areas

An AOC is defined as any area where a release to the environment of hazardous wastes or constituents has occurred or is suspected to have occurred on a nonroutine or nonsystematic basis. This includes any area where such a release in the future is judged to be a strong possibility.

PRC requests that, if available, the following facility information be provided during the VSI:

1. Two copies of a detailed map of the facility
2. Facility history, including dates of operation, ownership changes, and production processes
3. Current facility operations
4. Processes that generate waste that is treated, stored, or disposed of at the facility
5. Records of disposal of wastes generated at the facility (manifests, annual reports, etc...)
6. Security at the facility
7. Information regarding geology and the uses of ground water and surface water in the area
8. Permits (air, NPDES, etc...) the facility currently holds or has held in the past and documentation of any permit violations that may have occurred
9. Records of any spills that may have occurred at the facility
10. Descriptive operational information (location, dimensions, capacity, materials of construction, etc...), dates of start-up and closure, wastes managed, release controls, and release history for each SWMU



Illinois Environmental Protection Agency · 2200 Churchill Road, Springfield, IL 62706

217/782-6762

Refer to: 0312730002 -- Cook County
Northrop Corp. Defense Systems
ILD005128988
RCRA General

March 2, 1987

Karl E. Bremer, Chief
Technical Program Section
U.S. Environmental Protection Agency
Region V
230 South Dearborn
Chicago, Illinois 60604

RECEIVED

MAR 09 1987

SOLID WASTE BRANCH
U.S. EPA, REGION V

Dear Mr. Bremer:

Enclosed you will find the following:

1. The Initial Screening for Environmental Significance form for the above referenced facility.
2. A copy of the Certification Regarding Potential Releases from Solid Waste Management Units for the above referenced facility and/or the reply the Agency received in response to our request for information regarding the above.

The following form(s) were not on file at the IEPA for this facility:

1. Notification of Hazardous Waste Site (EPA Form 8900-1).
2. Notification of Hazardous Waste Site (EPA Form 8900-1) for the above referenced facility.

Based upon a review of the information available on the above referenced facility, the Agency has determined that this facility is not environmentally significant and that a Facility Management Plan should not be prepared. Please let us know if you do not agree with this determination.



Page 2

If you have any questions regarding this initial screening, please contact Mark A. Schollenberger of my staff at 217/782-6762.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Lawrence W. Eastep".

Lawrence W. Eastep, P.E., Manager

Permit Section
Division of Land Pollution Control

LWE:MAS:jab/1755g/3-4

Enclosure

cc: Division File
USEPA Region V -- Ann Budich
FOS Northern Region

Log 295 Closure

Copied to Reg 2-19-87

CHS
MAS

NORTHROP

Defense Systems Division
Electronics Systems Group

Northrop Corporation

600 Hicks Road
Rolling Meadows, Illinois
60008-1098
Telephone 312 259-9600
TWX 910 687-3785
TLX 270566

February 16, 1987

Mr. Lawrence Eastep
Division of Land Pollution Control
Permit Section
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, IL 62706

Subject: Northrop Corporation
Defense Systems Division
Rolling Meadows, Illinois
USEPA ID No. ILD 005 128 988

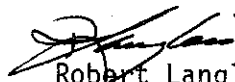
Dear Mr. Eastep:

Attached is the completed and signed certification form regarding releases from solid waste management units for closure plan review.

If you have any questions, please call Richard Ng at (312) 394-7716.

Very truly yours,

NORTHROP CORPORATION



Robert Langlois
Director
Administration/Facilities

RL/rr028/01R

Encl.

CC: W. Burks Terry

Tom Tutien
Baxter & Woodman
8678 Ridgefield Rd.
Crystal Lake, IL 60014

RECEIVED

FEB 19 1987

**CERTIFICATION REGARDING POTENTIAL RELEASES FROM
SOLID WASTE MANAGEMENT UNITS
(CLOSURE PLAN REVIEW)**

FACILITY NAME: Northrop Corporation - Defense Systems Division

EPA I.D. NUMBER: ILD005128988

LOCATION CITY: 600 Hicks Road, Rolling Meadows

STATE: Illinois 60010

1. Are there any of the following solid waste management units (existing or closed) at your facility? NOTE - DO NOT INCLUDE HAZARDOUS WASTES UNITS CURRENTLY SHOWN IN YOUR PART A APPLICATION and in your closure plan.

	<u>YES</u>	<u>NO</u>
• Landfill	_____	<u>X</u>
• Surface Impoundment	_____	<u>X</u>
• Land Farm	_____	<u>X</u>
• Waste Pile	_____	<u>X</u>
• Incinerator	_____	<u>X</u>
• Storage Tank (Above Ground)	_____	<u>X</u>
• Storage Tank (Underground)	_____	<u>X</u>
• Container Storage Area	_____	<u>X</u>
• Injection Wells	_____	<u>X</u>
• Wastewater Treatment Units	_____	<u>X</u>
• Transfer Stations	_____	<u>X</u>
• Waste Recycling Operations	_____	<u>X</u>
• Waste Treatment, Detoxification	_____	<u>X</u>
• Other _____	_____	<u>X</u>

2. If there are "Yes" answers to any of the items in Number 1 above, please provide a description of the wastes that were stored, treated or disposed of in each unit. In particular, please focus on whether or not the wastes would be considered as hazardous wastes or hazardous constituents under RCRA. Also include any available data on quantities or volume of wastes disposed on and the dates of disposal. Please also provide a description of each unit and include capacity, dimensions, location at facility, provide a site plan if available.

Not Applicable

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FEB 19 1987

NOTE: Hazardous waste are those identified in 40 CFR 261. Hazardous constituents are those listed in Appendix VIII of 40 CFR Part 261.

3. For the units noted in Number 1 above and also those hazardous waste units in your Part A application and in your closure plan. please describe for each unit any data available on any prior or current releases of hazardous wastes or constituents to the environment that may have occurred in the past or still be occurring.

Please provide the following information

- a. Date of release
- b. Type of waste released .
- c. Quantity or volume of waste released
- d. Describe nature of release (i.e., spill, overflow, ruptured pipe or tank, etc.)

No knowledge of hazardous wastes or constituents released
to the environment.

4. In regard to the prior releases described in Number 3 above, please provide (for each unit) any analytical data that may be available which would describe the nature and extent of environmental contamination that exists as a result of such releases. Please focus on concentrations of hazardous wastes or constituents present in contaminated soil or groundwater.

Not Applicable.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the submittal is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. (42 U.S.C. 6902 et seq. and 40 CFR 270.11(d))

RLS • Robert Langlois Director, Facilities/Administration
Typed Name and Title

[Signature]
Signature

2/7/87
Date

RECEIVED

FEB 19 1987

IEPA-DLPC

Q

CERTIFICATION REGARDING POTENTIAL RELEASES FROM
SOLID WASTE MANAGEMENT UNITS

FACILITY NAME: Northrop Corporation Defense System Division

EPA I.D. NUMBER: ILD 005128988

LOCATION CITY: Rolling Meadows

STATE: Illinois

1. Are there any of the following solid waste management units (existing or closed) at your facility? NOTE - DO NOT INCLUDE HAZARDOUS WASTE UNITS CURRENTLY SHOWN IN YOUR PART A APPLICATION

	<u>YES</u>	<u>NO</u>
• Landfill	_____	_____X_____
• Surface Impoundment	_____	_____X_____
• Land Farm	_____	_____X_____
• Waste Pile	_____	_____X_____
• Incinerator	_____	_____X_____
• Storage Tank (Above Ground)	_____	_____X_____
• Storage Tank (Underground)	_____	_____X_____
• Container Storage Area	_____	_____X_____
• Injection Wells	_____	_____X_____
• Wastewater Treatment Units	_____	_____X_____
• Transfer Stations	_____	_____X_____
• Waste Recycling Operations	_____	_____X_____
• Waste Treatment, Detoxification	_____	_____X_____
• Other _____	_____	_____X_____

2. If there are "Yes" answers to any of the items in Number 1 above, please provide a description of the wastes that were stored, treated or disposed of in each unit. In particular, please focus on whether or not the wastes would be considered as hazardous wastes or hazardous constituents under RCRA. Also include any available data on quantities or volume of wastes disposed of and the dates of disposal. Please also provide a description of each unit and include capacity, dimensions and location at facility. Provide a site plan if available.

NOTE: Hazardous wastes are those identified in 40 CFR 261. Hazardous constituents are those listed in Appendix VIII of 40 CFR Part 261.

3. For the units noted in Number 1 above and also those hazardous waste units in your Part A application, please describe for each unit any data available on any prior or current releases of hazardous wastes or constituents to the environment that may have occurred in the past or may still be occurring.

Please provide the following information

- a. Date of release
- b. Type of waste released
- c. Quantity or volume of waste released
- d. Describe nature of release (i.e., spill, overflow, ruptured pipe or tank, etc.)

No releases have occurred

4. In regard to the prior or continuing releases described in Number 3 above, please provide (for each unit) any analytical data that may be available which would describe the nature and extent of environmental contamination that exists as a result of such releases. Please focus on concentrations of hazardous wastes or constituents present in contaminated soil or groundwater.

Not applicable

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the submittal is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. (42 U.S.C. 6902 et seq. and 40 CFR 270.11(d))

John H. McNaughton
Vice President, Financial Management

Typed Name and Title

Signature

2/9/86
Date